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MARYLAND STATE ARCHIVES

GOVERNOR'S TASK FORCE

TO

STUDY ALTERNATIVE COLLEGE FINANCING METHODS

Report to the Governor
Les Disharoon - Chairman

November, 1987

Governor's Task Force to Study Alternative College Financing Methods

MEMBERS

Les Disharoon Chairman	Chairman of the Board & President, Monumental Corporation
Curt Anderson	Delegate, Maryland General Assembly Baltimore City
Raymond Beck	Senator, Maryland General Assembly Baltimore & Carroll Counties
Charles L. Benton	Secretary, Dept. of Budget & Fiscal Planning
Mary Boergers	Delegate, Maryland General Assembly, Montgomery County
Edwin Crawford	Senior Vice President, Baker, Watts & Co.
Patricia Florestano	Vice President for Governmental Relations, University of Maryland
J. Elizabeth Garraway	President, Maryland Independent College and University Association
Robert Harvey	Vice Chairman of the Board, Maryland National Corporation
Clarence M. Hicks	Director, Student Financial Aid Community College of Baltimore
Paula C. Hollinger	Senator, Maryland General Assembly Baltimore County
Douglas MacDonald	Executive Director, Maryland State Scholarship Board
Carol S. Petzold	Delegate, Maryland General Assembly, Montgomery County
Howard Scaggs, Sr.	Chairman of the Board, American National Building & Loan Association
Bennett H. Shaver	Executive Director, Maryland Retirement & Pension Systems
Hoke L. Smith	President, Towson State University

Governor's Task Force to Study
Alternative College Financing Methods

Professional Staff

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Governor's Task Force to Study
Alternative College Financing Matters

Charge to the Task Force

The Task Force to Study Alternative College Financing Methods was established on May 27, 1987 by Governor William Donald Schaefer. Provided in Appendix A is a copy of the appointment letter to Les Disharoon.

The Charge of the Task Force was "to undertake an examination of alternative methods for financing a college education, with particular emphasis on approaches which spread the burden of payment over a specified period of time."

The Task Force should

1) Study the efforts of other states that are dealing with this issue;

2) Complete an analysis of the different approaches taking into account risks and liabilities to both the State and the family; and

3) recommend whether there are new approaches which will assist students and families to afford college without eroding the traditional methods of financial support which are currently available.

The report of the task force is to be submitted to the Governor and the Maryland General Assembly on November 1, 1987.

Executive Summary

The Task Force to Study Alternative College Financing Methods sought to investigate various options including tuition trust funds, tuition IRA's, and a variety of other plans that would encourage increased saving for a college education. At the completion of discussion, the members decided on the following recommendations:

1) To offer Maryland residents a variety of savings options in a "Higher Education Savings Package."

2) The four investment vehicles to be included in this package are:
   a) single premium deferred annuities;
   b) certificates of deposit;
   c) State zero coupon bonds, and
   d) Federal EE Bonds.

3) To provide an incentive for people to save for their children's college education, the State should provide an interest subsidy on the principal amount saved. Specifically, a State subsidy should equal one percent for each year the principal is saved up to a maximum of 14 years. This subsidy will be payable only if the participant attends a Maryland institution.

4) A State marketing and education effort needs to be embarked upon in order to gain maximum participation of Marylanders.

The task force assessed the total fiscal impact on the State would be an annual cost of $15.3 million after a full twenty year phase-in period.

Further explanation of these recommendations can be found in the text of this report.

Introduction

Tuition prepayment and incentive plans to encourage savings for college are being discussed in most States. As of September, 1987, six States have enacted prepayment plans : Florida, Indiana, Maine, Michigan, Tennessee and Wyoming. Wyoming is the only state where the plan is currently operating. Two states, Illinois and North Carolina, have enacted savings plans.

During the 1987 Legislative session, four bills were introduced in the Maryland General Assembly concerning college tuition prepayment or savings plans. The legislation generated much interest and raised many questions which needed further study.

On May 27, 1987, Governor Schaefer appointed a Task Force composed of Legislators, financial experts, and educators to study alternative college tuition financing methods, and report back to him and the General Assembly by November 1, 1987.

The Task Force met to study alternative college financing methods beginning on July 7,1987. The first order of business was to specify the mission of the Task Force. The following definition was accepted as a basis for the Task Force's work.

"The rapidly rising costs of higher education are threatening students and families of college-age children with significant economic expenses. Due to federal financial aid cutbacks and the escalating costs of higher education, alternative and innovative financing plans for colleges must be explored.

The purpose of the Task Force is to undertake an examination of alternative methods for financing a college education with particular emphasis on approaches which spread the burden of payment over a time period prior to the completion of post secondary education. The analysis of different approaches should take into account risks and liabilities to the State, the family and the institutions of higher education.

The goal of the final report is to recommend whether there are new approaches which will assist students and families to afford college without eroding the traditional methods of financial support which are currently available."

Once the mission was established, the Task Force began with an overview of college costs and availability of financial aid in Maryland. At subsequent meetings, the members heard from experts representing Michigan, New Jersey, Illinois and Massachusetts describe a variety of approaches to encourage saving for a college education. After review of these approaches, discussion centered upon 1) what components were necessary to formulate a plan for Maryland, and 2) developing a set of recommendations.

College Costs and Financial Aid in Maryland

Between the 1980-1981 and the 1985-1986 academic years, tuition and fees increased 44 percent at Maryland public 2 year institutions, 65 percent at Maryland public 4 year institutions, and 81 percent at Maryland independent institutions. When comparing these figures with an increase of 31 percent in Maryland per capita and a 27 percent increase in the consumer price index, one finds a widening gap between college costs and a persons ability to pay to attend a college or university. (See Table 1)

During this same period, financial aid increased by 47 percent from $126 million to $185 million. Average awards increased 33 percent from $1,601 to $2,214. The increase in the average award amount is due to higher costs and higher ceilings on the awards. (See Table 2.)

An analysis of financial aid by source of funds in constant dollars between 1980-1981 and 1985-1986 reveals that federal funds for undergraduate financial aid decreased by 3.5 percent while State funds increased by 0.6 percent. During the same period, institutional aid increased by 70.6 percent and aid from private sources increased by 56.6 percent. (See Figure 1)

Figures 2, 3 and 4 reveal that although institutional and private sources of financial aid have increased substantially, the gap between college costs and available aid continues to grow.

Table 1

Trend in Tuition and Fees, Per Capita Income, and Financial Aid in Maryland

1980-81 to 1985

		1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	Percent Change	Average Annual Percent Change
TUITION & FEES									
Public 2-year Colleges	$	566	$ 613	$ 643	$ 690	$ 745	$ 813	43.63%	7.52%
Public 4-year Colleges & Universities	$	918	$ 1,082	$ 1,200	$ 1,332	$ 1,410	$ 1,517	65.25%	10.65%
Independent Colleges & Universities	$	3,883	$ 4,403	$ 5,081	$ 5,663	$ 6,362	$ 7,045	81.43%	12.66%
PER CAPITA INCOME (1)	$	11,958	$ 12,706	$ 13,633	$ 14,824	$ 15,862	$ 16,588	30.55%	6.78%
CONSUMER PRICE INDEX		259.60	281.50	298.40	313.10	317.30	328.50	26.54%	4.85%
FINANCIAL AID (2)									
Total Dollars (in millions)	$	126.30	$ 142.30	$ 135.40	$ 147.70	$ 162.50	$ 185.10	46.55%	8.17%
Average Award:									
Grants	$	1,133	$ 1,111	$ 1,118	$ 1,245	$ 1,363	$ 1,598	41.04%	8.13%
Loans	$	1,641	$ 2,082	$ 1,755	$ 1,729	$ 1,962	$ 2,121	29.25%	6.25%
Scholarships	$	560	$ 626	$ 681	$ 718	$ 824	$ 846	51.07%	8.69%
Employment	$	826	$ 901	$ 981	$ 980	$ 1,010	$ 1,104	33.65%	6.05%
Total	$	1,601	$ 1,805	$ 1,724	$ 1,795	$ 1,903	$ 2,214	32.66%	8.74%

(1) Source: U.S. Dept. of Commerce, Bureau of Economic Analysis

(2) Data for Undergraduate Students; Excludes Independent Postsecondary Institutions

Note: Data on Average Award for 1980-81 are estimates.

jmb/x1/a1.i50

Table 2

Maryland

Trend in Student Financial Aid By Funding Source

1980-81 to 1985-86

Undergraduates

	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	Dollar Change	Percent Change
Federal	$ 97,056,171	$ 109,285,957	$ 97,705,577	$ 103,646,955	$ 111,656,176	$ 120,869,968	$ 23,813,797	24.54%
State	$ 6,921,162	$ 7,377,990	$ 7,301,151	$ 7,600,305	$ 8,878,663	$ 8,981,797	$ 2,060,635	29.77%
Institutional	$ 17,747,652	$ 20,821,733	$ 24,366,253	$ 29,714,345	$ 32,766,571	$ 46,046,797	$ 28,299,145	159.45%
Private	$ 4,562,481	$ 4,836,456	$ 6,007,508	$ 6,754,076	$ 9,203,861	$ 9,218,197	$ 4,655,716	102.04%
Total	$ 126,287,466	$ 142,322,136	$ 135,380,489	$ 147,715,681	$ 162,505,271	$ 185,116,759	$ 58,829,293	46.58%

Average Award, 1981 to 1985-86

Undergraduates

	1981-1982	1982-1983	1983-1984	1984-1985	1985-1986	Dollar Change	Percent Change
Grants	$ 1,111	$ 1,118	$ 1,245	$ 1,363	$ 1,598	$ 487	43.80%
Loans	$ 2,082	$ 1,755	$ 1,729	$ 1,962	$ 2,121	$ 38	1.85%
Scholarships	$ 626	$ 681	$ 718	$ 824	$ 846	$ 221	35.25%
Employment	$ 901	$ 981	$ 980	$ 1,010	$ 1,104	$ 203	22.58%
Total	$ 1,805	$ 1,724	$ 1,795	$ 1,903	$ 2,214	$ 409	22.64%

Source: S-5 NEGIS Data

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Figure 1

Maryland

FINANCIAL AID BY FUNDING SOURCE

Undergraduate Students

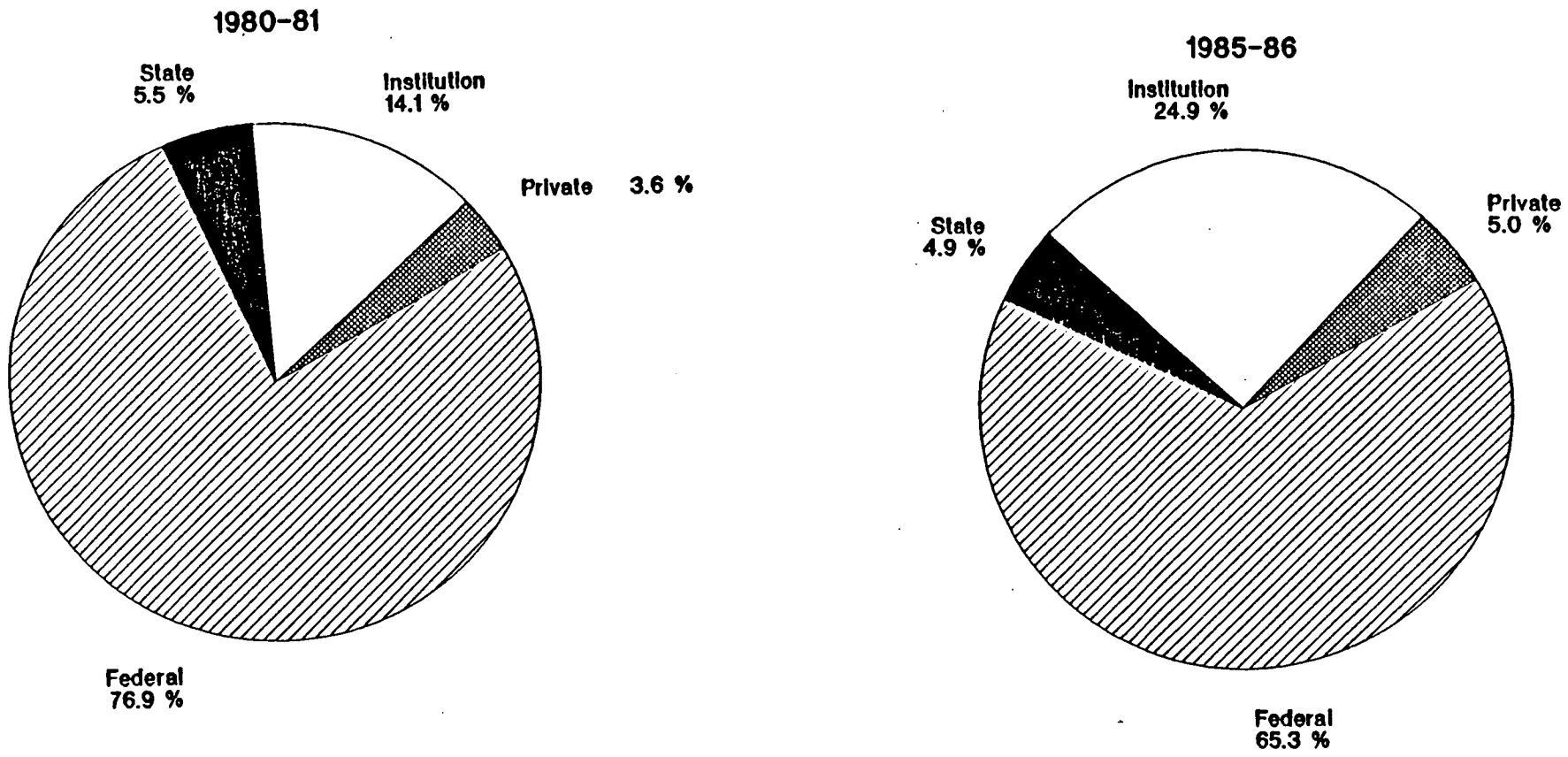
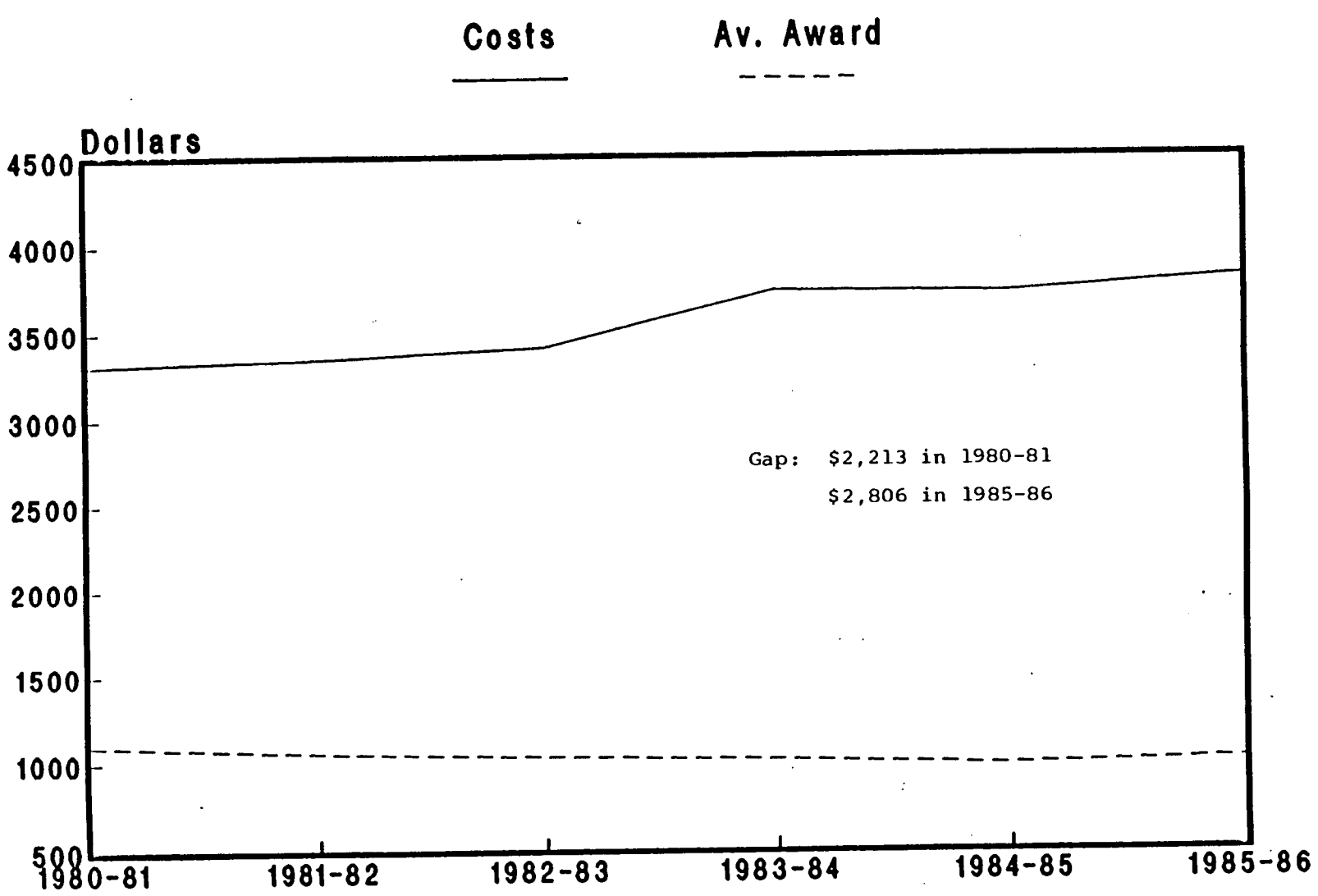


Figure 2

Maryland

TREND IN COLLEGE COST AND FINANCIAL AID

1980-81 to 1985-86 in Constant 1986 Dollars



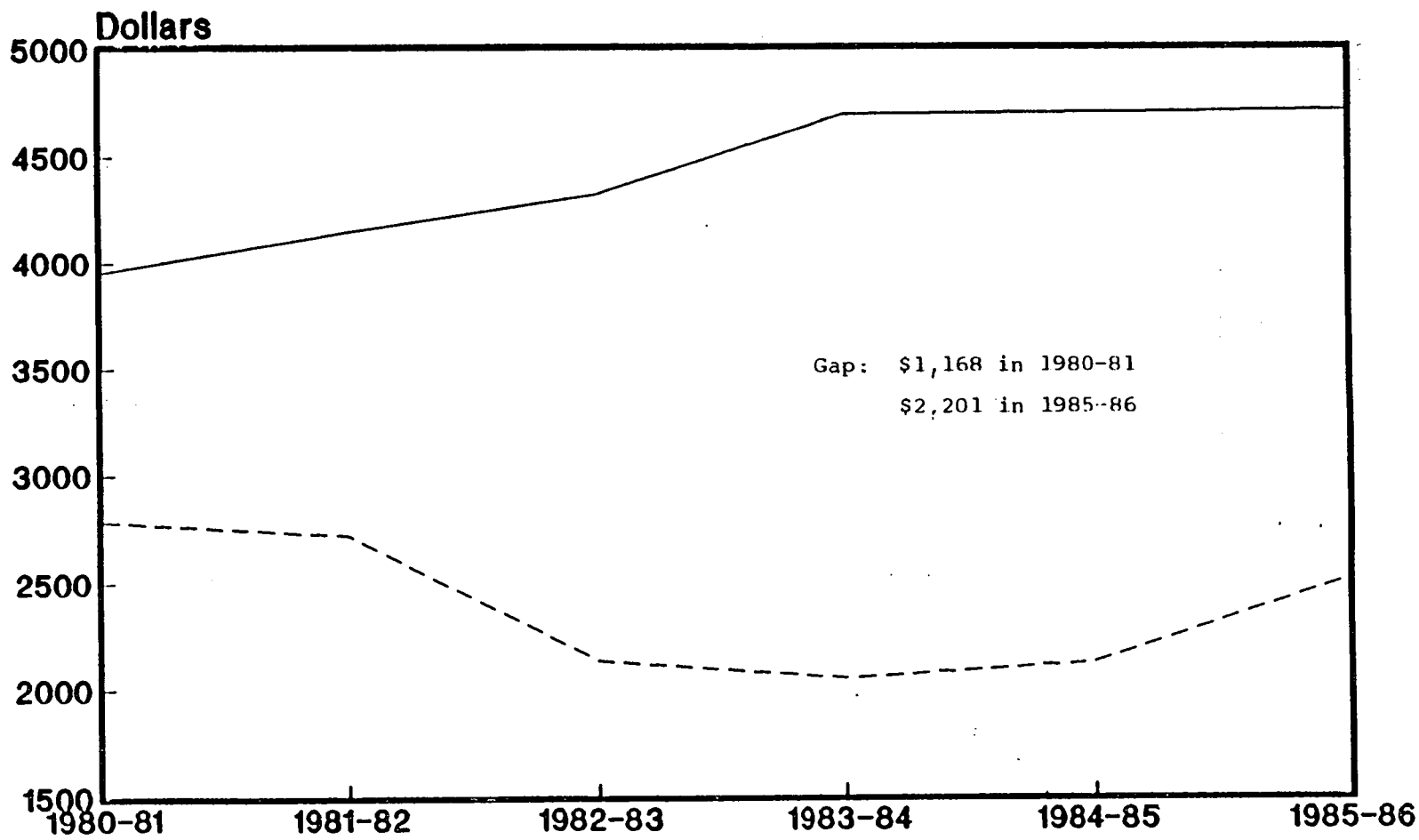
FT Undergraduates - Community Colleges

Figure 3

Maryland

TREND IN COLLEGE COST AND FINANCIAL AID

1980-81 to 1985-86 in Constant 1986 Dollars



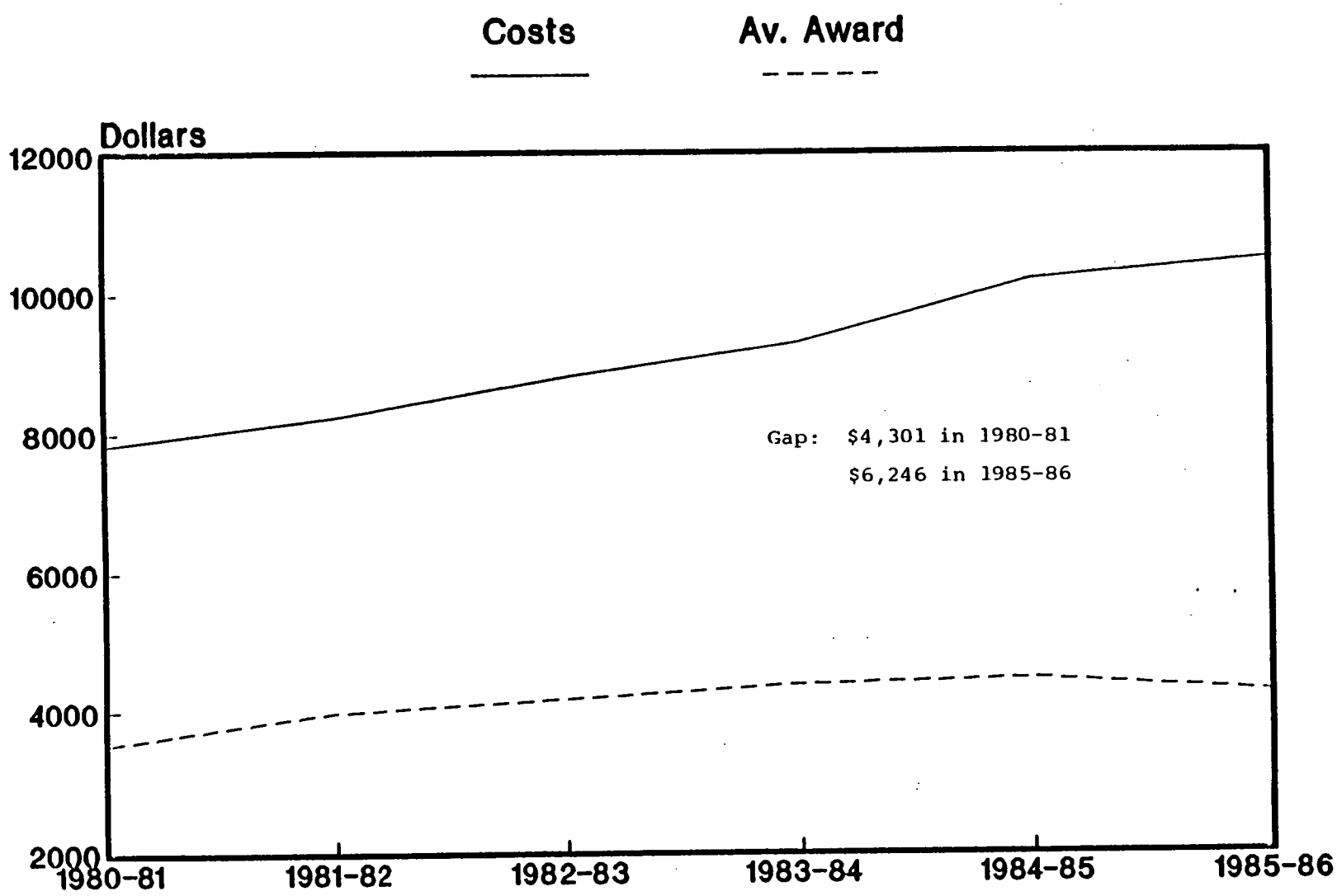
FT Undergrad.Res.- Public 4-year Institutions

Figure 4

Maryland

TREND IN COLLEGE COST AND FINANCIAL AID

1980-81 to 1985-86 in Constant 1986 Dollars



FT Undergraduates - Independent Institutions

Alternative Financing Approaches

The Task Force considered four basic educational savings models: Educational Trust, Educational IRA, Tuition Certificates and Savings Bonds. The Trust approach which is most closely associated with Michigan, Florida and New Jersey provides for parents to contribute a specified amount to a trust fund which is administered by the State. The trust provides a guarantee that tuition and fees will be covered at a specified set of institutions for student attendance on or after a certain date. The Trust approach requires the State or the institutions to provide a subsidy of unknown amount to insure the tuition guarantee if investments don't keep pace with inflation and tuition and fees. The trust provides very limited transferability of benefits among student recipients. If not used for college costs, principal with little or no interest will be returned. Numbers of participants may be limited to minimize State or institution liability. This plan requires an entity or agency to administer it. (See Appendix B for a detailed presentation of the New Jersey proposal.)

The Educational IRA which is associated with New York is a savings account with a maximum annual contribution. The income contributed to the account and the earnings on the account are not subject to State tax. The savings in the account are managed by the individuals who save. The Educational IRA does not include any guarantee. The only subsidy involved is the loss of State tax revenues on the saved funds. The accounts may be transferred to any student who attends college. If the account is not used by an eligible student recipient, principal and interest will be returned; State taxes will have to be paid on the total account. This plan has no administrative costs.

The Tuition Certificate Approach which is being considered by Massachusetts is similar to the Trust. Parents would purchase tuition certificates which would be redeemable for a certain number of credit hours at participating institutions on a specific date. The State and/or institutions must be willing to subsidize the Tuition Certificates. The amount of subsidy will depend on the relationship between the increase in tuition at the institutions and the increase in the value of the certificate. The certificates allow only very limited transferability among family members. They provide for return of principal with limited or no interest if not used at a participating college. Participation may be limited in order to minimize State or institutional liability. The Certificate approach requires a board to administer the plan. (See Appendix C for complete details of the Massachusetts plan.)

The fourth approach the Task Force reviewed was the Illinois Savings Bond plan. This method requires the State to sell a portion of its general obligation bonds as zero coupon bonds in small denominations. An interest bonus would be paid by the State on maturity if the bonds are used at an eligible college by the student for whom the bond was purchased. The bonds would be completely transferable and liquid; the principal and interest would be guaranteed at maturity but would fluctuate based on

market conditions prior to maturity. This approach would require some administration in Maryland to insure a supply of low denomination zero coupon bonds. (See appendix D for complete details including a copy of Illinois Legislation.)

Evaluation Criteria

In order to evaluate various approaches set forth above, the task force agreed on a set of premises to guide its deliberations in developing a plan for Maryland. These premises , in no order of importance, are as follows:

- The plan should be designed to encourage people to save money for college.

- The plan should encourage enrollment in Maryland institutions.

- The plan should not diminish existing financial aid programs.

- The plan should include quantitative economic benefits to the participants.

- The plan should not assume any changes in Federal tax law or any favorable tax rulings; but it must be flexible relative to future potential changes.

- The plan should be applicable to periods of enrollment increases and decreases as well as to changing demographics among the college population.

- The plan should be applicable to all students - full and part-time, undergraduate and graduate.

- The plan should provide coverage for all postsecondary education costs consistent with those established as "eligible costs of attendance" consistent with Federal guidelines.

- The plan should be applicable to all institutions of postsecondary education approved/licensed to operate in Maryland.

- The plan should provide for participation of all eligible students; limits should be imposed only when necessary to limit the cost to the State.

- The plan should insure that at a minimum all contributions will be returned if the savings are not used by an eligible student at an eligible institution of postsecondary education.

- The plan should have some general taxpayer subsidy which is quantifiable and definable relative to participation in the plan.

- The plan should have some form of cap on costs to the State.

- The plan should not put postsecondary institutions at financial risk.

- The plan should provide for mobility of participants coming into or leaving Maryland.

Given the above parameters, the Task Force concluded that it could not support a plan with a tuition guarantee because the level of State subsidy is unknown and undeterminable in advance. In addition, the institutions stated that they were unable to assume the risks inherent in a tuition guarantee because as with the State the risk is unknown and undeterminable. In addition, all of the resources of the institutions are committed.

Savings Options for a Maryland Plan

The Task Force reviewed four savings vehicles; single premium deferred annuities, certificates of deposit, State zero coupon bonds and Federal EE bonds. (See Appendix E.) Each was analyzed relative to certain criteria. In terms of the State zero coupon bonds, it is assumed that these would be offered in small denominations with no redemption provisions.

In all four cases, the principal can be guaranteed at maturity. The guarantee of the principal has different degrees of credibility prior to maturity depending on which savings vehicle and institutional provider are chosen. All of these savings vehicles would be insured or guaranteed by the appropriate agency: FDIC, FSLIC, State, Federal, Life and Health Guaranty Fund, etc. The yield will vary and the relationship of yield among the vehicles also will vary. The certificates of deposit, zero coupons and Federal EE bonds are completely liquid while the deferred annuity has very limited liquidity.

All four of the savings plans considered may be purchased in units or installments. The deferred annuity and certificate of deposit have flexible maturity lengths while the Federal EE bonds mature in 12 years and the State zero coupon bonds cannot exceed 15 years. In all savings vehicles discussed, the initial contribution is made with post-tax dollars. The internal build-up is tax deferred until receipt on the deferred annuity and Federal EE bonds while it is taxed annually on the Certificate of Deposit. There is no tax liability on the interest accumulation of the State zero coupon tax exempt bond. The interest accumulation on the Federal EE bond is subject only to federal tax; it is exempt from State and local taxes.

Legislation is probably required to offer the State zero coupon bonds in a form marketable to the small saver. The deferred annuity would be offered by insurance companies, the certificate of deposit by banks and Savings and Loans, and the Federal government currently markets and sells its EE bonds. State administration will be required only for the State zero coupon bonds.

All of the savings vehicles will require an education and marketing effort by the State in order to gain maximum participation by Marylanders. It is anticipated that the private market will respond with the development of special savings products suitable to this initiative in Maryland. Competition among vendors should lead to the development of superior products. Further, it is expected that much of the publicity and marketing of these products will be handled by the private sector.

State Interest Subsidy

In order to provide an incentive for people who are not currently saving for their children's college education and to encourage those who are saving to increase the level of their saving, the Task Force recommends that the State provide a simple interest subsidy on the principal amount saved. In order to encourage people to start saving when their children are young, the subsidy should be greater the earlier the savings begins.

Specifically, the Task Force recommends that a State subsidy equal to 100 basis points or one percent be provided for each year the contributed principal amount is saved up to a maximum of 14 years. The State subsidy will only be paid if the student uses the savings to attend an institution of postsecondary education in Maryland. The subsidy will be necessary to make the savings vehicles attractive. The State subsidy will only be paid if the participant attends a Maryland institution.

Cost to the State

Cost estimates for this program are based on a series of assumptions which are delineated in Table 3. Based on data collected by Roper for the National Association of Independent Colleges and Universities, it is assumed that currently about half of all students finance their college education in part with savings. It also is assumed that among those that save, the average level of savings is $552 a year and that the savings were started when the prospective students were four years old. This provides, at these savings rates, $144.4 million in savings annually to be used for tuition, fee, room and board or commuting costs by the 150,000 full-time equivalent students currently attending postsecondary education in Maryland. This is equivalent to about 20 percent of these costs annually.

The program will be fully phased-in in 20 years. It is assumed that people begin saving when their children are four years old and save until they are eighteen and begin college. It is further assumed the total amount of saving available to finance college tuition fees and living costs will increase from the current level of $144 million to $204.5 million in twenty years, a 40 percent increase attributable to this program. The annual costs to the State for the interest subsidy are listed below. In addition there will be administrative costs for advertising and coupon registration of about $50,000 the first year and about $25,000 in future years. The State's maximum liability for the interest subsidy will be reached in Year 20 at $15.33 million.

TABLE 3

FISCAL ESTIMATE
FOR
TUITION SAVINGS PLAN

1. Enrollment of Maryland residents (full-time equivalent students) at Maryland institutions of postsecondary education in FY 1987:

Independent Institutions:	13,000
Community Colleges:	64,000
Four-Year Publics	64,000
Proprietary	9,000
	150,000 FTES

2. Estimated cost to attend college in FY 1987:

   a. Tuition and required fee

Independent Institutions	$ 8,000 X 13,000 =	$104,000,000
Community Colleges	$ 1,000 X 64,000 =	64,000,000
Four Year Publics	$ 1,700 X 64,000 =	108,800,000
Proprietary	$ 2,000 X 9,000 =	18,000,000
		$294,800,000

   b. Normal living expenses/room and board
   $3000 X 150,000 = $450,000,000

   c. Total Cost $744,800,000

3. Financial Aid available for undergraduate and graduate students:

Grants	$180,000,000
Loans	118,000,000
Total	$298,000,000

4. Funds required from current income, savings and other borrowing to support FY 1987 postsecondary education:

Total cost:	$744,800,000
Total aid:	$298,000,000
	$446,800,000

5. Best estimates of saving - NAICU study

   a. Median Annual Saving of Savers = $517 a year in 1983-84
   Updated to FY 1987: $552

   b. Half of parents of college prospects are currently saving: 150,000 X .5 = 75,000 savers

   c. Majority of savers start saving when their oldest child is 4.

d. Estimate of principal saved for college:

$550	a year
14	years of saving
$7700	total savings
4	years of college
$1925	available savings per year
X 75,000	savers
$144,375,000	savings principal available per year for college

e. If savings for college for the child total $144.4 million a year, this will mean that 20 percent of total tuition, fees and living costs would be financed from parental savings.

6. Flow of Saving - see next page

YEAR OF COLLEGE ATTENDANCE		YEARS IN WHICH SAVED PRIOR TO COLLEGE ATTENDANCE														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1990	144.4	144.1														
1991	145.2	11.4	133.8													
1992	146.9	12.0	11.4	123.5												
1993	149.2	12.6	12.0	11.4	113.2											
1994	152.1	13.2	12.6	12.0	11.4	102.9										
1995	155.7	13.9	13.2	12.6	12.0	11.4	92.6									
1996	160.0	14.6	13.9	13.2	12.6	12.0	11.4	82.3								
1997	164.3	14.6	14.6	13.9	13.2	12.6	12.0	11.4	72.0							
1998	168.6	14.6	14.6	14.6	13.9	13.2	12.6	12.0	11.4	61.7						
1999	172.9	14.6	14.6	14.6	14.6	13.9	13.2	12.6	12.0	11.4	52.4					
2000	177.2	14.6	14.6	14.6	14.6	14.6	13.9	13.2	12.6	12.0	11.4	41.1				
2001	181.5	14.6	14.6	14.6	14.6	14.6	14.6	13.9	13.2	12.6	12.0	11.4	30.8			
2002	185.8	14.6	14.6	14.6	14.6	14.6	14.6	14.6	13.9	13.2	12.6	12.0	11.4	20.5		
2003	190.2	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	13.9	13.2	12.6	12.0	11.4	10.3	
2004	194.5	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	13.9	13.2	12.6	12.0	11.4	0
2005	197.7	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	13.9	13.2	12.6	12.0	0
2006	200.3	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	13.9	13.2	12.6	0
2007	202.3	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	13.9	13.2	0
2008	203.7	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	13.9	0
2009	204.5	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	0
2010	204.5	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	0

Note: Assumes all savings for students to attend college will have a coupon placed on it in FY 1989, the year the program is enacted. Thus, $144.1 million has been saved for students who will attend college in one year, 1990 and $113.2 million has been saved for students who will attend college in four years, 1993. Further, this table assumes that the average level of savings will be $11.4 million in 1990, the year after the program has been implemented, $12.0 million two years after implementation up to a new level of annual savings of $14.6 million which will be achieved six years after implementation.

State Cost for Interest Rate Subsidy

Year 1:	$1.44 million	Year 8	$ 9.29	15	$14.08
2	2.79	9	10.15	16	14.33
3	4.05	10	10.96	17	14.78
4	5.24	11	11.70	18	15.04
5	6.34	12	12.38	19	15.23
6	7.39	13	13.00	20	15.33
7	8.37	14	13.58	21	15.33

It is recommended that the State limit the funds it will affix its coupon to each year to $225 million and the State should pay a maximum of 14 percent simple interest added to the principal savings which were made 14 years or more prior to college entrance.

Administration

The State subsidy would be provided in the form of a coupon which would be registered with the State Treasurer's Office or some other appropriate existing State agency or corporate trust agent designated by the State. The State would need to track all outstanding coupons as well as determine a pay-off on the coupons when they are turned in at an institution of postsecondary education in Maryland.

If the State sells zero coupon bonds, it will require an agency of the State to purchase the bonds and make them available for resale in small units to college savers. If left to market forces, the zero coupons are likely to be purchased in one block and will not be available to the small saver.

The State will need a comprehensive marketing campaign to educate the public about the benefits of this program. Table 4 indicates the value of the State subsidy to a family's college saving. The State should supplement, when necessary, the marketing of the various products in support of this program in the private sector.

Benefits to the State

This program should have numerous positive benefits to the State.

- More students will be encouraged from a young age to consider going to college.

The advertising campaign that will accompany this program will encourage families to begin considering a college education for their children when they are very young. The State's part of the campaign must encourage people to save what they can and to explain that for those with need when they get to college, there are financial aid programs to help them. This should ultimately increase the participation rate of youngsters in higher education.

- Fewer students will require loans to finance their college education.

The level of debt which many students are experiencing is becoming unmanageable. This will encourage greater reliance on saving rather than borrowing to finance higher education.

- More students will attend college in-State.

Currently, Maryland is a net exporter of students. More than 50 percent of the high school graduates with an A average leave the State.

- Will put the State in the forefront in the nation in designing an innovative program which uses to maximum advantage the private sector.

APPENDIX A

STATE OF MARYLAND

OFFICE OF THE GOVERNOR

WILLIAM DONALD SCHAEFER
GOVERNOR

G-06

May 27, 1987

Mr. Les Disharoon
Chairman of the Board and
President
Monumental Life Corporation
1111 North Charles Street
Baltimore, Maryland 21201

Dear Mr. Disharoon:

In cooperation with the General Assembly of Maryland, I am appointing a Task Force to Study Alternative College Financing Methods. I am very pleased to appoint you to serve on this Task Force.

The rapidly rising costs of higher education is threatening students and families of college-age children with significant economic expenses. Due to federal financial aid cutbacks and the escalating costs of higher education, alternative and innovative financing plans for college must be explored.

Accordingly, I am asking the Task Force to undertake an examination of alternative methods for financing a college education, with particular emphasis on approaches which spread the burden of payment over a specified time period. The Task Force should study the efforts of other states, such as Michigan and Missouri, to deal with this issue. The analysis of different approaches should take into account risks and liabilities to both the State and the family. The final report should recommend whether there are new approaches which will assist students and families to afford college without eroding the traditional methods of support which are currently available.

STATE HOUSE, ANNAPOLIS, MARYLAND 21404
(301) 974-3804 TTY FOR DEAF BALTIMORE AREA 974-2609 D. C. METRO 565-0450

The Task Force should have its study and recommendations completed and prepared for submission to the Governor and the General Assembly by November 1, 1987.

Thank you for your willingness to devote the time and effort necessary to study this important issue.

I would appreciate your contacting the members of the Task Force to establish the date and location of your first meeting.

Sincerely,

Governor

APPENDIX B

State of New Jersey

DEPARTMENT OF HIGHER EDUCATION
OFFICE OF STUDENT ASSISTANCE
4 QUAKERBRIDGE PLAZA
CN 540
TRENTON, NEW JERSEY 08625

Simulating a State Guaranteed Tuition Plan: New Jersey Proposal

Lutz K. Berkner
Office of Student Assistance
New Jersey Department of Higher Education

Costs and Risks of Prepayment Plans

The central problem in designing a guaranteed tuition plan is how it should be financed. The two basic financing issues are: 1) who is to pay for the costs if tuition rates increase faster than rates of return? 2) who should share in the risks?

In order to be successful, the plan must be equally attractive to both individuals and colleges, and this will happen only if they share the costs and the risks in return for certain assurances. The individual participant should be assured that the plan can offer a return (in tuition value) that is greater than the return available through individual investments. The colleges must be assured that the tuition revenue from the fund can cover an acceptable threshold of their actual tuition charges.

A plan can be structured so that the costs are paid by one or a combination of the following:

1. The colleges can bear the cost by being required to accept as payment for tuition whatever the plan fund has earned.

2. The participants can be required to pay for it by paying a premium above current tuition levels. This will normally happen in any plan that sets

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payments based on conservative actuarial assumptions which will tend to overestimate tuition increases and underestimate investment returns.

3. The participants who withdraw from the plan and do not claim their tuition benefits can be required to pay for it through penalties which restrict the amount of the refund.

4. The state can pay for it through subsidies or guarantees.

The issue of who pays the cost is closely related to the issue of who shares the risk of financial loss. The risk to participating individuals depends primarily on withdrawal rights. If participants can withdraw both their principal and the full investment earnings from the plan fund, then there is no risk to them (except that the return might have been higher elsewhere). If they want tax-free benefits, they must accept the risk of losing their earnings if the tuition benefit is not claimed. The risk to the colleges is that the plan fund will not be able to earn enough to reimburse them for an acceptable percentage of the actual tuition charged. This institutional risk can be reduced by structuring the plan to retain all or part of the earnings of those who withdraw and requiring the payment of a premium on current tuition.

The New Jersey Guaranteed College Tuition Plan Proposal

Many of the state plans under discussion make the implicit assumption that the colleges will be paid 100% of their actual tuition charges. This is to be achieved through the determination of "actuarially sound" payment schedules. What this will mean in practice is that future tuition increases must be projected and these must then be "discounted" at the expected rates of investment return. If the return is expected to be below tuition increases, the payments required will be greater than current tuition.

In the New Jersey proposal currently under discussion the risks and costs are shared by the participants and the colleges. The main features are:

- participants buy any number of college credits at the actual current price; their guarantee is that they can claim the use of these credits at any time in the future, no matter what the price per credit is then.

- the colleges are guaranteed reimbursement of 90% of the actual per credit tuition charged when the pre-purchased credits are claimed; if investment returns allow, they may receive up to 100% reimbursement.

- participants who withdraw without claiming their pre-paid credits are required to contribute to the cost of the program. Under option A those who withdraw are refunded principal plus interest, but at a rate below the fund's average return. Under option B only the principal may be withdrawn, but the benefits are expected to be tax-exempt and tuition may be purchased at a 5%-10% discount.

Simulation of Annual Costs

The attached tables show the results of a model which simulates the proposed New Jersey Guaranteed College Tuition Plan (option A which allows withdrawals with interest) using the following assumptions:

- 1,000 participants enroll in the plan each year for 20 years, their ages at enrollment are uniformly distributed from birth through 14, the maximum age for entry. They make an annual payment every year they are in the plan until they are 18, at which point they claim the tuition benefit or withdraw the principal plus earnings 2% below the average return on the fund.

- the ages of each entering cohort of participants are assumed to be uniformly distributed, 1/15 or 67 from each cohort reach age 18 after 4 years (since the maximum age at entry is 14) and every succeeding year for 15 years. The plan reaches stability after 19 years when 67 participants from each of the first 15 entering cohorts (67 x 15 = 1,000 roughly) leave the plan.

- participants will be in the plan for an average of 11 years (median age of entry of 7 plus four years of participation after age 14).

- the annual tuition purchases are fixed for each cohort. They start at $1,000 for the first year of the plan and are increased for each cohort at the same rate as the average tuition increase.

The numbers at the top half of the table for each "entry year" into the program show the 18-year averages and totals for each cohort of participants fro birth to age 14 who enter the plan in the same year, and who will therefore take from 4 to 18 years to claim their tuition benefit. The numbers on the bottom half of the table for each "exit year" represent the costs actually incurred in each future year. The first pay-out costs to the plan are incurred in year 5, when only those who were 14 years old in year 1 go to college. The model reaches stability after year 18. Since no new participants are added after year 20 the number of claims drops until year 38 when the last one-year-olds who joined in year 20 go to college.

Column legend:

A	The entry year of each cohort of 1,000 participants into the plan.
B	The exit year from the plan when participants reach 18.
C	The number of participants entering or leaving the plan each year.
D	The average number of years that payments were made to purchase tuition (assumes a payment every year).
E	The average annual dollar payment (assumed to be fixed for each cohort).
F	The total dollar amount of the payments (in millions) which the participants contributed.
G	The total pre-paid tuition benefits (in millions) claimed by those who matriculate (70% assumed). This is the actual value of the pre-paid credits the year they are claimed.
H	The plan funds available to pay the tuition benefits (total of all payments plus investment return minus the principal and a 2% lower return for non-matriculants).
I	The cost of the guaranteed tuition to the colleges (the difference between tuition benefits claimed and plan funds paid out).
J	The percentage of actual tuition price which could be paid out of plan funds to reimburse the colleges.
K	The (inflated) dollar value of the average pre-paid tuition benefit.
L,M,N	The number of years of college enrollment that the tuition benefit is worth at a state college, Rutgers University and an independent college (average).

Table 1 simulates a 8% annual tuition growth, a 7% average annual investment return, end 70% of the participants matriculating at a New Jersey college. In year 1 the first cohort of one thousand participants enters the plan. Since their ages are uniformly distributed (67 are age 1, 67 are age 2, etc.) and they make e payment each year, they will make an everage of 11 payments (median age 7 plus four years after age 14) of $1,000 each. The total amount paid by the cohort after 18 years is $11 million. The total tultion benefit claimed is $13.8 million, which represents the sum of the actual value of the pre-paid credits the years that they are claimed by the 70% of the particlpants who matriculate.

The plan fund will collect end earn $13.6 million from this cohort (principal plus 7% earnings from 70%, plus 2% earnings from the 30% who wlthdraw). The cost of the plan to the colleges is $257,000, the difference between the value of the tuition benefit claimed end the plan funds; the plan could reimburse the colleges for 98% of ectual tuition. The average tuition benefit received over 15 years was $19,750. This would have bought 5.8 years of tultion at e state college, 4.0 years at Rutgers, or 1.2 years at an independent college. Those choosing the state colleges would have paid in less; those choosing an independent institution would need to pay in more.

The velue of the tuition benefits in terms of "tuition-years" and the percentage of the tuition covered by the plan is the same for all entering cohorts. The ebsolute dollar values, however, keep growing at 8% per year. The bottom half of the table shows the same Information for each group of particlpants who reach age 18 end leave the plan. In year 5 only the 67 who entered at age 14 in year 1 leave the plan. They have paid en everage of $1,000 for four years, which is enough to buy 2.6 years of tuition at a state college. Each year the oldest members of the next cohort leave the plan until year 19 when there are 1,000 entering and also 1,000 leaving, so the plan attains stability.

During the first four years of the plan there are no costs, since the 14-year olds who entered in year 1 will not go to college until year 5. During the first 10-15 years, the costs will be relatively low; during years 19-24, the plan ettains stability; efter year 24 the costs rise because no new particlpants are being added to the simulation.

what if student is ready for college at 16 & 17 years old?

Evaluating the Potential Costs

The cost to the colleges will be determined by the long-run difference between the average rate of tuition increase and the average rate of return on investment to the plan fund (the "point spread" between tuition rates and interest rates). Currently, the return on ten-year Treasury bonds is between 7-9 percent, while average New Jersey college tuition has also been increasing by 7-9 percent annually over the past five years. Although several colleges are considering increases higher than this in the next few years, such high rates of tuition growth cannot be sustained over a long period of time, and it is unlikely that the average spread will exceed two points in the long run. Under either withdrawal option, the Plan should be able to pay the colleges over 90% of actual tuition even if the rate of return on investment averages two percentage points below tuition growth.

It is important not to confuse the issue by looking at inflation instead of investment returns. If we compare the ten-year moving average of New Jersey tuition since 1967 with 10-year moving average U.S. bond yields, even without compounding the yield has never averaged as much as 2 points below tuition.

The financial impact of the proposed Plan on the participating colleges is difficult to specify or to interpret in absolute dollars, because the full costs of the program will not occur for several decades, during which time inflation will totally change our current conception of the value of a dollar. Participants can enroll in the plan at any age below 15, but cannot normally claim the tuition benefits until age 18; therefore participants can be in the plan anywhere from 4 to 18 years or later before maturity. If about the same number of participants enter the plan each year, and their ages are about evenly distributed, then it will take 18 years before the full costs of the plan are realized. If tuition actually continued to increase annually at the current rate of about 8% during that time, the colleges would be charging four times as much as today. Therefore, the potential costs of the plan to the colleges can best be understood in relative terms, as the percentage of actual future tuition that the Plan will be able to reimburse to the colleges.

The last group of tables shows the results of simulations with different combinations of tuition and interest rates assuming that either 70 percent or 80

percent of the participants will actually claim the tuition benefits and matriculate in a New Jersey college. Under the tax-free option (B), the plan fund retains all the earnings of those who do not matriculate. In this example the taxable option (A) assumes withdrawal of principal plus interest earnings at a rate 2% below the average rate of return.

In Table A, the columns show the average annual rate of tuition growth, while the rows show the average annual rate of return on investment. The numbers in the boxes show the redemption value of the policies as a percentage of actual tuition when the rate of return is equal to or less than tuition growth. For example, if we expect 70% matriculation, a 7% return, and a 9% tuition growth, then the redemption value will cover 91% of actual tuition.

Table B employs the same analytic approach, but arranges the results according to the percentage "point spread" between tuition growth and rate of return. Note that with option A, the level of tuition and return has a minimal effect. The percentage of tuition covered depends only on the point spread.

Under both options, the plan covers an additional 2% of actual tuition for every 10% increase in the withdrawal rate.

Additional tables show that if the size of the payments is increased every year (instead of remaining fixed for each cohort), the plan fund will perform better with larger point spreads.

The plan also performs significantly better with an older age distribution than a younger one, if the point spread is over 1%.

TABLE 11

NEW JERSEY GUARANTEED TUITION PLAN: OPTION A
8% TUITION GROWTH 7% INVESTMENT RETURN 70% NJ MATRICULATION
SAVINGS WITHDRAWL 2% BELOW RETURN / NO PREMIUM
PAYMENTS FIXED AT ENTRY YEAR TO RECEIVE $1000 TUITION AT 1986 PRICES

(A) ENTRY YEAR	(B) EXIT YEAR	(C) NUM-BER	(D)AVG YRS PAID	(E)AVG YRLY PAYT	(F)TOTAL PAID IN $MIL	(G)TUITION CLAIMS $MIL	(H)PLAN PAYOUT $MIL	(I)PLAN COST $MIL	(J)PCT OF TUITION COVERED	(K)AVG $ TUITION CLAIM	(L)TUITION YRS VALUE STATE C	(M)TUITION YRS VALUE RUTGERS	(N)TUITION YRS VALUE INDEPNDT
1	.	1000	11.0	1000	11.0	13.8	13.6	0.257	0.98	19,750	5.8	4.0	1.2
2	.	1000	11.0	1080	11.9	14.9	14.7	0.277	0.98	21,330	5.8	4.0	1.2
3	.	1000	11.0	1170	12.8	16.1	15.8	0.302	0.98	23,030	5.8	4.0	1.2
4	.	1000	11.0	1260	13.9	17.4	17.1	0.325	0.98	24,870	5.8	4.0	1.2
5	.	1000	11.0	1360	15.0	18.8	18.5	0.350	0.98	26,870	5.8	4.0	1.2
6	.	1000	11.0	1470	16.2	20.3	19.9	0.380	0.98	29,010	5.8	4.0	1.2
7	.	1000	11.0	1590	17.5	21.9	21.5	0.410	0.98	31,340	5.8	4.0	1.2
8	.	1000	11.0	1710	18.9	23.7	23.2	0.442	0.98	33,840	5.8	4.0	1.2
9	.	1000	11.0	1850	20.4	25.6	25.1	0.478	0.98	36,550	5.8	4.0	1.2
10	.	1000	11.0	2000	22.0	27.6	27.1	0.515	0.98	39,470	5.8	4.0	1.2
11	.	1000	11.0	2160	23.7	29.8	29.3	0.556	0.98	42,630	5.8	4.0	1.2
12	.	1000	11.0	2330	25.6	32.2	31.6	0.602	0.98	46,040	5.8	4.0	1.2
13	.	1000	11.0	2520	27.7	34.8	34.2	0.649	0.98	49,720	5.8	4.0	1.2
14	.	1000	11.0	2720	29.9	37.6	36.9	0.700	0.98	53,700	5.8	4.0	1.2
15	.	1000	11.0	2940	32.3	40.6	39.8	0.756	0.98	58,000	5.8	4.0	1.2
16	.	1000	11.0	3170	34.9	43.8	43.0	0.818	0.98	62,640	5.8	4.0	1.2
17	.	1000	11.0	3430	37.7	47.4	46.5	0.884	0.98	67,650	5.8	4.0	1.2
18	.	1000	11.0	3700	40.7	51.1	50.2	0.954	0.98	73,060	5.8	4.0	1.2
19	.	1000	11.0	4000	44.0	55.2	54.2	1.028	0.98	78,910	5.8	4.0	1.2
20	.	1000	11.0	4320	47.5	59.7	58.5	1.111	0.98	85,220	5.8	4.0	1.2
.	5	67	4.0	1000	0.3	0.2	0.2	0.001	1.00	4,870	2.6	1.8	0.5
.	6	133	4.5	1040	0.6	0.5	0.5	0.002	1.00	5,800	2.9	2.0	0.6
.	7	200	5.0	1070	1.1	1.0	0.9	0.005	0.99	6,810	3.1	2.1	0.6
.	8	267	5.5	1110	1.6	1.5	1.5	0.009	0.99	7,930	3.3	2.3	0.7
.	9	333	6.0	1140	2.3	2.1	2.1	0.014	0.99	9,150	3.6	2.5	0.7
.	10	400	6.5	1180	3.1	2.9	2.9	0.022	0.99	10,480	3.8	2.6	0.8
.	11	467	7.0	1220	4.0	3.9	3.9	0.032	0.99	11,940	4.0	2.8	0.8
.	12	533	7.5	1260	5.0	5.1	5.0	0.046	0.99	13,530	4.2	2.9	0.9
.	13	600	8.0	1300	6.2	6.4	6.3	0.065	0.99	15,260	4.4	3.0	0.9
.	14	667	8.5	1340	7.6	8.0	7.9	0.089	0.99	17,160	4.6	3.2	0.9
.	15	733	9.0	1390	9.1	9.9	9.7	0.119	0.99	19,220	4.7	3.3	1.0
.	16	800	9.5	1430	10.9	12.0	11.9	0.158	0.99	21,480	4.9	3.4	1.0
.	17	867	10.0	1480	12.8	14.5	14.3	0.206	0.99	23,930	5.1	3.5	1.0
.	18	933	10.5	1530	15.0	17.4	17.1	0.266	0.98	26,600	5.2	3.6	1.1
.	19	1000	11.0	1580	17.4	20.7	20.3	0.340	0.98	29,510	5.3	3.7	1.1
.	20	1000	11.0	1710	18.8	22.3	21.9	0.368	0.98	31,870	5.3	3.7	1.1
.	21	1000	11.0	1840	20.3	24.1	23.7	0.397	0.98	34,420	5.3	3.7	1.1
.	22	1000	11.0	1990	21.9	26.0	25.6	0.429	0.98	37,170	5.3	3.7	1.1
.	23	1000	11.0	2150	23.6	28.1	27.6	0.464	0.98	40,150	5.3	3.7	1.1
.	24	1000	11.0	2320	25.5	30.4	29.9	0.500	0.98	43,360	5.3	3.7	1.1
.	25	933	11.5	2450	26.3	31.7	31.2	0.536	0.98	48,550	5.5	3.8	1.1
.	26	867	12.0	2580	26.9	32.9	32.3	0.572	0.98	54,200	5.7	4.0	1.2
.	27	800	12.5	2720	27.2	33.8	33.2	0.607	0.98	60,330	5.9	4.1	1.2
.	28	733	13.0	2850	27.2	34.4	33.8	0.639	0.98	67,000	6.1	4.2	1.3
.	29	667	13.5	2980	26.8	34.6	34.0	0.668	0.98	74,240	6.2	4.3	1.3
.	30	600	14.0	3120	26.2	34.5	33.8	0.692	0.98	82,110	6.4	4.4	1.3
.	31	533	14.5	3260	25.2	33.8	33.1	0.706	0.98	90,650	6.5	4.5	1.3
.	32	467	15.0	3400	23.8	32.6	31.9	0.710	0.98	99,910	6.7	4.6	1.4
.	33	400	15.5	3540	21.9	30.8	30.1	0.699	0.98	109,970	6.8	4.7	1.4
.	34	333	16.0	3690	19.7	28.2	27.5	0.668	0.98	120,880	6.9	4.8	1.4
.	35	267	16.5	3840	16.9	24.8	24.2	0.611	0.98	132,710	7.0	4.8	1.4
.	36	200	17.0	3990	13.6	20.6	19.9	0.[illegible]	0.9[illegible]	145,550	7.1	4.9	1.5
.	37	133	17.5	4150	9.7	14.9	14.5	0.[illegible]	0.[illegible]	159,470	7.2	5.0	1.5
.	38	67	18.0	4320	5.2	8.1	7.[illegible]	[illegible]	[illegible]	[illegible],550	7.3	5.1	1.5

TABLE 2
NEW JERSEY GUARANTEED TUITION PLAN: OPTION A
9% TUITION GROWTH 7% INVESTMENT RETURN 70% NJ MATRICULATION
SAVINGS WITHDRAWL 2% BELOW RETURN / NO PREMIUM
PAYMENTS FIXED AT ENTRY YEAR TO RECEIVE $1000 TUITION AT 1986 PRICES

(A) ENTRY YEAR	(B) EXIT YEAR	(C) NUM-BER	(D)AVG YRS PAID	(E)AVG YRLY PAYT	(F)TOTAL PAID IN $MIL	(G)TUITION CLAIMS $MIL	(H)PLAN PAYOUT $MIL	(I)PLAN COST $MIL	(J)PCT OF TUITION COVERED	(K)AVG $ TUITION CLAIM	(L)TUITION YRS VALUE STATE C	(M)TUITION YRS VALUE RUTGERS	(N)TUITION YRS VALUE INDEPNDT
1	.	1000	11.0	1000	11.0	14.9	13.6	1.382	0.91	21,350	5.5	3.8	1.1
2	.	1000	11.0	1090	12.0	16.3	14.8	1.507	0.91	23,280	5.5	3.8	1.1
3	.	1000	11.0	1190	13.1	17.8	16.1	1.644	0.91	25,370	5.5	3.8	1.1
4	.	1000	11.0	1300	14.2	19.4	17.6	1.789	0.91	27,650	5.5	3.8	1.1
5	.	1000	11.0	1410	15.5	21.1	19.1	1.952	0.91	30,140	5.5	3.8	1.1
6	.	1000	11.0	1540	16.9	23.0	20.9	2.125	0.91	32,850	5.5	3.8	1.1
7	.	1000	11.0	1680	18.4	25.1	22.7	2.318	0.91	35,810	5.5	3.8	1.1
8	.	1000	11.0	1830	20.1	27.3	24.8	2.527	0.91	39,030	5.5	3.8	1.1
9	.	1000	11.0	1990	21.9	29.8	27.0	2.753	0.91	42,550	5.5	3.8	1.1
10	.	1000	11.0	2170	23.9	32.5	29.5	3.000	0.91	46,370	5.5	3.8	1.1
11	.	1000	11.0	2370	26.0	35.4	32.1	3.273	0.91	50,550	5.5	3.8	1.1
12	.	1000	11.0	2580	28.4	38.6	35.0	3.566	0.91	55,100	5.5	3.8	1.1
13	.	1000	11.0	2810	30.9	42.0	38.2	3.886	0.91	60,060	5.5	3.8	1.1
14	.	1000	11.0	3070	33.7	45.8	41.6	4.237	0.91	65,460	5.5	3.8	1.1
15	.	1000	11.0	3340	36.8	49.9	45.3	4.616	0.91	71,350	5.5	3.8	1.1
16	.	1000	11.0	3640	40.1	54.4	49.4	5.034	0.91	77,780	5.5	3.8	1.1
17	.	1000	11.0	3970	43.7	59.3	53.9	5.487	0.91	84,780	5.5	3.8	1.1
18	.	1000	11.0	4330	47.6	64.7	58.7	5.978	0.91	92,400	5.5	3.8	1.1
19	.	1000	11.0	4720	51.9	70.5	64.0	6.518	0.91	100,720	5.5	3.8	1.1
20	.	1000	11.0	5140	56.6	76.9	69.7	7.105	0.91	109,790	5.5	3.8	1.1
.	5	67	4.0	1000	0.3	0.2	0.2	0.006	0.97	4,990	2.5	1.7	0.5
.	6	133	4.5	1040	0.6	0.6	0.5	0.017	0.97	5,980	2.8	1.9	0.6
.	7	200	5.0	1080	1.1	1.0	1.0	0.034	0.97	7,080	3.0	2.1	0.6
.	8	267	5.5	1120	1.6	1.5	1.5	0.059	0.96	8,290	3.3	2.2	0.7
.	9	333	6.0	1160	2.3	2.2	2.2	0.094	0.96	9,640	3.5	2.4	0.7
.	10	400	6.5	1210	3.1	3.1	3.0	0.142	0.95	11,120	3.7	2.5	0.8
.	11	467	7.0	1250	4.1	4.2	4.0	0.206	0.95	12,750	3.9	2.7	0.8
.	12	533	7.5	1300	5.2	5.4	5.1	0.290	0.95	14,560	4.0	2.8	0.8
.	13	600	8.0	1340	6.5	6.9	6.5	0.399	0.94	16,540	4.2	2.9	0.9
.	14	667	8.5	1390	7.9	8.7	8.2	0.538	0.94	18,730	4.4	3.0	0.9
.	15	733	9.0	1450	9.5	10.9	10.1	0.713	0.93	21,140	4.5	3.1	0.9
.	16	800	9.5	1500	11.4	13.3	12.4	0.931	0.93	23,790	4.7	3.2	1.0
.	17	867	10.0	1560	13.5	16.2	15.0	1.200	0.93	26,700	4.8	3.3	1.0
.	18	933	10.5	1620	15.8	19.5	18.0	1.532	0.92	29,900	5.0	3.4	1.0
.	19	1000	11.0	1680	18.5	23.4	21.5	1.936	0.92	33,420	5.1	3.5	1.0
.	20	1000	11.0	1830	20.1	25.5	23.4	2.111	0.92	36,430	5.1	3.5	1.0
.	21	1000	11.0	2000	21.9	27.8	25.5	2.300	0.92	39,710	5.1	3.5	1.0
.	22	1000	11.0	2170	23.9	30.3	27.8	2.507	0.92	43,280	5.1	3.5	1.0
.	23	1000	11.0	2370	26.1	33.0	30.3	2.733	0.92	47,180	5.1	3.5	1.0
.	24	1000	11.0	2580	28.4	36.0	33.0	2.979	0.92	51,430	5.1	3.5	1.0
.	25	933	11.5	2750	29.5	37.9	34.7	3.211	0.92	58,060	5.3	3.6	1.1
.	26	867	12.0	2910	30.3	39.6	36.2	3.443	0.91	65,350	5.4	3.8	1.1
.	27	800	12.5	3070	30.7	41.1	37.4	3.667	0.91	73,330	5.6	3.9	1.2
.	28	733	13.0	3240	30.9	42.1	38.3	3.876	0.91	82,090	5.7	4.0	1.2
.	29	667	13.5	3410	30.7	42.8	38.7	4.058	0.91	91,690	5.9	4.1	1.2
.	30	600	14.0	3580	30.1	42.9	38.7	4.202	0.90	102,200	6.0	4.2	1.2
.	31	533	14.5	3760	29.1	42.5	38.2	4.293	0.90	113,730	6.1	4.2	1.3
.	32	467	15.0	3940	27.6	41.3	37.0	4.311	0.90	126,350	6.3	4.3	1.3
.	33	400	15.5	4120	25.6	39.2	35.0	[illegible]	0.89	140,160	6.4	4.4	1.3
.	34	333	16.0	4310	23.0	36.2	32.2	[illegible]	0.89	155,290	6.5	4.5	1.3
.	35	267	16.5	4510	19.8	32.1	28.4	[illegible]	0.88	171,850	6.6	4.5	1.4
.	36	200	17.0	4710	16.0	26.6	[illegible]	[illegible]	[illegible]	189,960	6.7	4.6	1.4
.	37	133	17.5	4920	11.5	19.6	[illegible]	[illegible]	[illegible]	209,790	6.8	4.7	1.4
.	38	67	18.0	5140	6.2	10.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.7	1.4

TABLE 3
NEW JERSEY GUARANTEED TUITION PLAN: OPTION A
10% TUITION GROWTH 7% INVESTMENT RETURN 70% NJ MATRICULATION
SAVINGS WITHDRAWL 2% BELOW RETURN / NO PREMIUM
PAYMENTS FIXED AT ENTRY YEAR TO RECEIVE $1000 TUITION AT 1986 PRICES

(A) ENTRY YEAR	(B) EXIT YEAR	(C) NUM-BER	(D) AVG YRS PAID	(E) AVG YRLY PAYT	(F) TOTAL PAID IN $MIL	(G) TUITION CLAIMS $MIL	(H) PLAN PAYOUT $MIL	(I) PLAN COST $MIL	(J) PCT OF TUITION COVERED	(K) AVG $ TUITION CLAIM	(L) TUITION YRS VALUE STATE C	(M) TUITION YRS VALUE RUTGERS	(N) TUITION YRS VALUE INDEPNDT
1	.	1000	11.0	1000	11.0	16.2	13.6	2.615	0.84	23,110	5.3	3.7	1.1
2	.	1000	11.0	1100	12.1	17.8	14.9	2.877	0.84	25,430	5.3	3.7	1.1
3	.	1000	11.0	1210	13.3	19.6	16.4	3.165	0.84	27,970	5.3	3.7	1.1
4	.	1000	11.0	1330	14.6	21.5	18.1	3.480	0.84	30,760	5.3	3.7	1.1
5	.	1000	11.0	1460	16.1	23.7	19.9	3.829	0.84	33,840	5.3	3.7	1.1
6	.	1000	11.0	1610	17.7	26.1	21.8	4.211	0.84	37,220	5.3	3.7	1.1
7	.	1000	11.0	1770	19.5	28.7	24.0	4.631	0.84	40,950	5.3	3.7	1.1
8	.	1000	11.0	1950	21.4	31.5	26.4	5.096	0.84	45,040	5.3	3.7	1.1
9	.	1000	11.0	2140	23.6	34.7	29.1	5.604	0.84	49,540	5.3	3.7	1.1
10	.	1000	11.0	2360	25.9	38.1	32.0	6.164	0.84	54,500	5.3	3.7	1.1
11	.	1000	11.0	2590	28.5	42.0	35.2	6.780	0.84	59,950	5.3	3.7	1.1
12	.	1000	11.0	2850	31.4	46.2	38.7	7.458	0.84	65,940	5.3	3.7	1.1
13	.	1000	11.0	3140	34.5	50.8	42.6	8.204	0.84	72,540	5.3	3.7	1.1
14	.	1000	11.0	3450	38.0	55.9	46.8	9.024	0.84	79,790	5.3	3.7	1.1
15	.	1000	11.0	3800	41.8	61.4	51.5	9.928	0.84	87,770	5.3	3.7	1.1
16	.	1000	11.0	4180	46.0	67.6	56.7	10.920	0.84	96,550	5.3	3.7	1.1
17	.	1000	11.0	4600	50.5	74.3	62.3	12.012	0.84	106,200	5.3	3.7	1.1
18	.	1000	11.0	5050	55.6	81.8	68.6	13.216	0.84	116,820	5.3	3.7	1.1
19	.	1000	11.0	5560	61.2	90.0	75.4	14.536	0.84	128,510	5.3	3.7	1.1
20	.	1000	11.0	6120	67.3	99.0	83.0	15.991	0.84	141,360	5.3	3.7	1.1
.	5	67	4.0	1000	0.3	0.2	0.2	0.012	0.95	5,110	2.5	1.7	0.5
.	6	133	4.5	1040	0.6	0.6	0.5	0.032	0.94	6,170	2.7	1.9	0.6
.	7	200	5.0	1090	1.1	1.0	1.0	0.064	0.94	7,350	2.9	2.0	0.6
.	8	267	5.5	1140	1.7	1.6	1.5	0.112	0.93	8,670	3.2	2.2	0.7
.	9	333	6.0	1180	2.4	2.4	2.2	0.179	0.92	10,150	3.4	2.3	0.7
.	10	400	6.5	1230	3.2	3.3	3.0	0.271	0.92	11,790	3.6	2.5	0.7
.	11	467	7.0	1280	4.2	4.5	4.1	0.395	0.91	13,620	3.7	2.6	0.8
.	12	533	7.5	1340	5.3	5.8	5.3	0.558	0.90	15,660	3.9	2.7	0.8
.	13	600	8.0	1390	6.7	7.5	6.8	0.769	0.90	17,930	4.1	2.8	0.8
.	14	667	8.5	1450	8.2	9.5	8.5	1.040	0.89	20,440	4.2	2.9	0.9
.	15	733	9.0	1510	10.0	11.9	10.5	1.383	0.88	23,240	4.3	3.0	0.9
.	16	800	9.5	1570	12.0	14.8	12.9	1.812	0.88	26,350	4.5	3.1	0.9
.	17	867	10.0	1640	14.2	18.1	15.7	2.346	0.87	29,790	4.6	3.2	1.0
.	18	933	10.5	1710	16.8	22.0	19.0	3.005	0.86	33,620	4.7	3.3	1.0
.	19	1000	11.0	1790	19.7	26.5	22.7	3.812	0.86	37,860	4.8	3.3	1.0
.	20	1000	11.0	1970	21.6	29.2	25.0	4.193	0.86	41,640	4.8	3.3	1.0
.	21	1000	11.0	2160	23.8	32.1	27.5	4.612	0.86	45,810	4.8	3.3	1.0
.	22	1000	11.0	2380	26.2	35.3	30.2	5.073	0.86	50,390	4.8	3.3	1.0
.	23	1000	11.0	2620	28.8	38.8	33.2	5.580	0.86	55,430	4.8	3.3	1.0
.	24	1000	11.0	2880	31.7	42.7	36.5	6.138	0.86	60,970	4.8	3.3	1.0
.	25	933	11.5	3080	33.0	45.3	38.7	6.671	0.85	69,410	5.0	3.5	1.0
.	26	867	12.0	3280	34.1	47.8	40.6	7.210	0.85	78,740	5.2	3.6	1.1
.	27	800	12.5	3480	34.8	49.9	42.1	7.738	0.84	89,080	5.3	3.7	1.1
.	28	733	13.0	3690	35.1	51.6	43.4	8.238	0.84	100,510	5.4	3.8	1.1
.	29	667	13.5	3900	35.1	52.8	44.1	8.688	0.84	113,160	5.6	3.9	1.2
.	30	600	14.0	4110	34.5	53.4	44.3	9.058	0.83	127,140	5.7	3.9	1.2
.	31	533	14.5	4330	33.5	53.2	43.9	9.313	0.83	142,590	5.8	4.0	1.2
.	32	467	15.0	4560	31.9	52.2	42.7	9.412	0.82	159,670	5.9	4.1	1.2
.	33	400	15.5	4800	29.7	50.0	40.7	9.305	0.81	178,530	6.0	4.2	1.2
.	34	333	16.0	5040	26.9	46.5	37.6	8.929	0.81	199,370	6.1	4.2	1.3
.	35	267	16.5	5290	23.3	41.5	33.3	8.215	0.80	222,380	6.2	4.3	1.3
.	36	200	17.0	5560	18.9	34.7	27.6	7.074	0.80	247,780	6.3	4.3	1.3
.	37	133	17.5	5830	13.6	25.7	20.3	5.408	0.79	275,820	6.3	4.4	1.3
.	38	67	18.0	6120	7.3	14.3	11.2	3.096	0.78	306,770	6.4	4.4	1.3

NEW JERSEY GUARANTEED TUITION PLAN
PERCENTAGE OF ACTUAL TUITION COVERED BY THE PLAN
AT VARIOUS RATES OF TUITION, RETURN AND NJ MATRICULATION
PLAN A RETURN -2%; PLAN B WITH 5% DISCOUNT
PAYMENTS FIXED AT ENTRY YEAR TO RECEIVE $1000 TUITION AT 1986 PRICES

....TABLE A.... PERCENT OF ACTUAL TUITION COVERED		PLAN OPTIONS																			
		(A) TAXABLE										(B) TAX EXEMPT									
		TUITION GROWTH x										TUITION GROWTH x									
		3	4	5	6	7	8	9	10	11	12	3	4	5	6	7	8	9	10	11	12
		PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT
NJ MATRICULATION x	RATE OF RETURN																				
70	3	106	98	91	85	78	73	67	62	57	53	103	96	89	82	76	71	65	60	56	51
	4	.	106	98	91	84	78	72	67	62	57	.	105	98	91	84	78	72	66	61	56
	5	.	.	106	98	91	84	78	72	66	61	.	.	107	99	92	85	79	73	67	62
	6	.	.	.	106	98	91	84	78	72	66	.	.	.	109	101	94	87	80	74	68
	7	.	.	.	.	106	98	91	84	77	71	.	.	.	.	111	103	95	88	81	75
	8	.	.	.	.	.	106	98	91	84	77	.	.	.	.	.	113	105	97	89	82
	9	.	.	.	.	.	.	106	98	91	83	.	.	.	.	.	.	115	106	98	90
	10	.	.	.	.	.	.	.	106	98	90	.	.	.	.	.	.	.	116	107	99
	11	.	.	.	.	.	.	.	.	106	98	.	.	.	.	.	.	.	.	118	109
	12	.	.	.	.	.	.	.	.	.	106	.	.	.	.	.	.	.	.	.	119
80	RATE OF RETURN																				
	3	103	96	89	83	77	71	66	61	56	52	99	93	86	80	74	68	63	58	54	50
	4	.	103	96	89	83	76	71	65	60	56	.	101	94	87	81	75	69	64	59	54
	5	.	.	103	96	89	82	76	70	65	60	.	.	102	95	88	81	75	69	64	59
	6	.	.	.	103	96	89	82	76	70	65	.	.	.	103	96	89	82	76	70	64
	7	.	.	.	.	104	96	89	82	76	70	.	.	.	.	104	97	89	83	76	70
	8	.	.	.	.	.	104	96	88	82	75	.	.	.	.	.	106	98	90	83	77
	9	.	.	.	.	.	.	104	96	88	81	.	.	.	.	.	.	107	98	91	84
	10	.	.	.	.	.	.	.	104	96	88	.	.	.	.	.	.	.	107	99	91
	11	.	.	.	.	.	.	.	.	104	96	.	.	.	.	.	.	.	.	108	100
	12	.	.	.	.	.	.	.	.	.	104	.	.	.	.	.	.	.	.	.	109

NEW JERSEY GUARANTEED TUITION PLAN
PERCENTAGE OF ACTUAL TUITION COVERED BY THE PLAN
AT VARIOUS RATES OF TUITION, RETURN AND NJ MATRICULATION
PLAN A RETURN -2%; PLAN B WITH 5% DISCOUNT
PAYMENTS FIXED AT ENTRY YEAR TO RECEIVE $1000 TUITION AT 1986 PRICES

....TABLE B.... PERCENT OF ACTUAL TUITION COVERED		PLAN OPTIONS																			
		(A) TAXABLE										(B) TAX EXEMPT									
		POINT SPREAD BETWEEN TUITION AND RETURN										POINT SPREAD BETWEEN TUITION AND RETURN									
		0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
		PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT
NJ MATRICULATION %	RATE OF RETURN																				
70	3	106	98	91	85	78	73	67	62	57	53	103	96	89	82	76	71	65	60	56	51
	4	106	98	91	84	78	72	67	62	57	.	105	98	91	84	78	72	66	61	56	.
	5	106	98	91	84	78	72	66	61	.	.	107	99	92	85	79	73	67	62	.	.
	6	106	98	91	84	78	72	66	.	.	.	109	101	94	87	80	74	68	.	.	.
	7	106	98	91	84	77	71	.	.	.	.	111	103	95	88	81	75	.	.	.	.
	8	106	98	91	84	77	.	.	.	.	.	113	105	97	89	82	.	.	.	.	.
	9	106	98	91	83	.	.	.	.	.	.	115	106	98	90	.	.	.	.	.	.
	10	106	98	90	.	.	.	.	.	.	.	116	107	99	.	.	.	.	.	.	.
	11	106	98	.	.	.	.	.	.	.	.	118	109	.	.	.	.	.	.	.	.
	12	106	.	.	.	.	.	.	.	.	.	119	.	.	.	.	.	.	.	.	.
80	RATE OF RETURN																				
	3	103	96	89	83	77	71	66	61	56	52	99	93	86	80	74	68	63	58	54	50
	4	103	96	89	83	76	71	65	60	56	.	101	94	87	81	75	69	64	59	54	.
	5	103	96	89	82	76	70	65	60	.	.	102	95	88	81	75	69	64	59	.	.
	6	103	96	89	82	76	70	65	.	.	.	103	96	89	82	76	70	64	.	.	.
	7	104	96	89	82	76	70	.	.	.	.	104	97	89	83	76	70	.	.	.	.
	8	104	96	88	82	75	.	.	.	.	.	106	98	90	83	77	.	.	.	.	.
	9	104	96	88	81	.	.	.	.	.	.	107	98	91	84	.	.	.	.	.	.
	10	104	96	88	.	.	.	.	.	.	.	107	99	91	.	.	.	.	.	.	.
	11	104	96	.	.	.	.	.	.	.	.	108	100	.	.	.	.	.	.	.	.
	12	104	.	.	.	.	.	.	.	.	.	109	.	.	.	.	.	.	.	.	.

01-Jun-87 \DATA\TUITION\CHANGE

DEPARTMENT OF HIGHER EDUCATION
OFFICE OF STUDENT ASSISTANCE

TUITION, INFLATION AND INTEREST RATES 1967-1986

	TUITION $			TUITION INDEX			CONSUMER PRICE INDEX	ANNUAL % INCREASE				BOND INTEREST US 10-YR
YEAR	STATE COLL.	RUTGERS UNIV.	INDEP-ENDENT	STATE COLL.	RUTGERS UNIV.	INDEP-ENDENT	USA	US CPI	STATE COLL.	RUTGERS UNIV.	INDEP-ENDENT	ANNUAL AVERAGE
1967-68	350	400	1200	100	100	100	100					4.5
1968-69	350	400	1300	100	100	108	104	4.0	0.0	0.0	8.3	5.0
1969-70	350	400	1500	100	100	125	110	5.8	0.0	0.0	15.4	6.0
1970-71	350	400	1700	100	100	142	116	5.5	0.0	0.0	13.3	6.8
1971-72	535	585	1800	153	146	150	121	4.3	52.9	46.3	5.9	6.2
1972-73	535	585	1900	153	146	158	125	3.3	0.0	0.0	5.6	6.5
1973-74	535	585	2000	153	146	167	133	6.4	0.0	0.0	5.3	7.0
1974-75	535	585	2200	153	146	183	148	11.3	0.0	0.0	10.0	7.8
1975-76	704	760	2400	201	190	200	162	9.5	31.6	29.9	9.1	7.8
1976-77	704	760	2500	201	190	208	171	5.6	0.0	0.0	4.2	7.5
1977-78	704	760	2650	201	190	221	182	6.4	0.0	0.0	6.0	7.9
1978-79	704	760	2800	201	190	233	195	7.1	0.0	0.0	5.7	8.9
1979-80	736	832	3100	210	208	258	218	11.8	4.5	9.5	10.7	10.5
1980-81	800	940	3450	229	235	288	247	13.3	8.7	13.0	11.3	13.7
1981-82	864	1110	3880	247	278	323	272	10.1	8.0	18.1	12.5	13.5
1982-83	960	1366	4430	274	342	369	289	6.3	11.1	23.1	14.2	12.0
1983-84	1024	1490	4850	293	373	404	297	2.8	6.7	9.1	9.5	11.8
1984-85	1088	1520	5300	311	380	442	308	3.7	6.3	2.0	9.3	11.5
1985-86	1184	1748	5800	338	437	483	319	3.6	8.8	15.0	9.4	9.0
1986-87	1280	1852	6200	366	463	517	323	1.3	8.1	5.9	6.9	8.0

Independent college tuition is estimated.
Consumer Price Index is for calendar year of fall term.
Bond yields are 10 Year US Treasury.

DEPARTMENT OF HIGHER EDUCATION
OFFICE OF STUDENT ASSISTANCE

TUITION, INFLATION AND INTEREST RATES 1967-1986

YEAR	TUITION INDEX			CONSUMER PRICE INDEX	TEN YEAR MOVING AVERAGE					POINT SPREAD		
					ANNUAL % INCREASE				AVERAGE	RETURNS - TUITION		
	STATE COLL.	RUTGERS UNIV.	INDEP-ENDENT	USA	US CPI	STATE COLL.	RUTGERS UNIV.	INDEP-ENDENT	BOND INTEREST SIMPLE	STATE COLL.	RUTGERS UNIV.	INDEP-ENDENT
1967-68	100	100	100	100								
1968-69	100	100	108	104								
1969-70	100	100	125	110								
1970-71	100	100	142	116								
1971-72	153	146	150	121								
1972-73	153	146	158	125								
1973-74	153	146	167	133								
1974-75	153	146	183	148								
1975-76	201	190	200	162								
1976-77	201	190	208	171								
1977-78	201	190	221	182	6.2	8.5	7.6	8.3	6.9	-1.6	-0.7	-1.4
1978-79	201	190	233	195	6.5	8.5	7.6	8.1	7.2	-1.3	-0.4	-0.9
1979-80	210	208	258	218	7.1	8.9	8.6	7.6	7.7	-1.2	-0.9	0.1
1980-81	229	235	288	247	7.9	9.8	9.9	7.4	8.3	-1.5	-1.6	0.3
1981-82	247	278	323	272	8.5	5.3	7.1	8.0	9.0	3.7	1.9	1.0
1982-83	274	342	369	289	8.8	6.4	9.4	8.9	9.6	3.2	0.2	0.7
1983-84	293	373	404	297	8.4	7.1	10.3	9.3	10.0	2.9	-0.3	0.7
1984-85	311	380	442	308	7.7	7.7	10.5	9.3	10.4	2.7	-0.1	1.1
1985-86	338	437	483	319	7.1	5.4	9.0	9.3	10.5	5.1	1.5	1.2
1986-87	366	463	517	323	6.6	6.2	9.6	9.6	10.6	4.4	1.0	1.0

01-Jun-87

\DATA\TUITION\CHANGE

Tuition and CPI are average annual increase for prior 10 years.
Bond yields are 10 year averages.

New Jersey Guaranteed College Tuition Plan Proposal (A)
Effect of Variations in Behavior
On % of Tuition Reimbursed by the Plan

(A) Withdrawals (Fixed payments)

Point Spread	Percentage Matriculating 60%	70%	80%	90%
0	109%	106%	104%	102%
1	101	98	96	94
2	94	91	89	87
3	86	84	82	80

- Every additional 10% matriculating reduces coverage by about 2 percentage points.

(B) Age distribution of entrants (Fixed payments, 70% matriculation)

Point Spread	Age distribution All Over 7	Equal 1-15	All Under 7
0	104%	106%	107%
1	99	98	98
2	94	91	90
3	90	84	82

- Younger age distributions reduce coverage significantly with larger point spreads.

(C) Fixed vs. Increasing Size of Payments (70% matriculation)

Point Spread	Annual Payment Amount Fixed	Increasing
0	106%	105%
1	98	98
2	91	92
3	84	86

- Larger payments in the later years increases coverage.

NEW JERSEY GUARANTEED TUITION PLAN
PERCENTAGE OF ACTUAL TUITION COVERED BY THE PLAN
AT VARIOUS RATES OF TUITION, RETURN AND NJ MATRICULATION
PLAN A RETURN -2%; PLAN B WITH 5% DISCOUNT
PAYMENTS FIXED AT ENTRY YEAR TO RECEIVE $1000 TUITION AT 1986 PRICES
YOUNGER AGE DISTRIBUTION

....TABLE B.... PERCENT OF ACTUAL TUITION COVERED		PLAN OPTIONS																			
		(A) TAXABLE										(B) TAX EXEMPT									
		POINT SPREAD BETWEEN TUITION AND RETURN										POINT SPREAD BETWEEN TUITION AND RETURN									
		0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
		PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT
NJ MATRICULATION %	RATE OF RETURN																				
70	3	106	98	90	83	76	70	64	59	54	49	104	96	88	81	74	68	63	57	52	48
	4	106	98	90	83	76	70	64	58	53	.	106	98	90	83	76	70	64	58	53	.
	5	107	98	90	83	76	69	64	58	.	.	109	100	92	84	77	71	65	59	.	.
	6	107	98	90	82	76	69	63	.	.	.	111	102	93	86	78	72	66	.	.	.
	7	107	98	90	82	75	69	.	.	.	.	113	103	95	87	80	73	.	.	.	.
	8	107	98	90	82	75	.	.	.	.	.	115	105	96	88	81	.	.	.	.	.
	9	107	98	90	82	.	.	.	.	.	.	116	107	98	89	.	.	.	.	.	.
	10	107	98	90	.	.	.	.	.	.	.	118	108	99	.	.	.	.	.	.	.
	11	107	98	.	.	.	.	.	.	.	.	119	109	.	.	.	.	.	.	.	.
	12	107	.	.	.	.	.	.	.	.	.	121	.	.	.	.	.	.	.	.	.
80	RATE OF RETURN																				
	3	104	96	88	81	74	68	63	57	52	48	100	92	85	78	72	66	60	55	51	46
	4	104	96	88	81	74	68	62	57	52	.	102	93	86	79	72	66	61	56	51	.
	5	104	95	88	80	74	68	62	57	.	.	103	95	87	80	73	67	61	56	.	.
	6	104	95	88	80	74	67	62	.	.	.	104	96	88	81	74	68	62	.	.	.
	7	104	95	87	80	73	67	.	.	.	.	105	97	89	81	74	68	.	.	.	.
	8	104	95	87	80	73	.	.	.	.	.	106	98	89	82	75	.	.	.	.	.
	9	104	95	87	80	.	.	.	.	.	.	107	98	90	82	.	.	.	.	.	.
	10	104	95	87	.	.	.	.	.	.	.	108	99	91	.	.	.	.	.	.	.
	11	104	95	.	.	.	.	.	.	.	.	109	100	.	.	.	.	.	.	.	.
	12	104	.	.	.	.	.	.	.	.	.	110	.	.	.	.	.	.	.	.	.

NEW JERSEY GUARANTEED TUITION PLAN
PERCENTAGE OF ACTUAL TUITION COVERED BY THE PLAN
AT VARIOUS RATES OF TUITION, RETURN AND NJ MATRICULATION
PLAN A RETURN -2%; PLAN B WITH 5% DISCOUNT
PAYMENTS FIXED AT ENTRY YEAR TO RECEIVE $1000 TUITION AT 1986 PRICES
OLDER AGE DISTRIBUTION

....TABLE B.... PERCENT OF ACTUAL TUITION COVERED		PLAN OPTIONS																			
		(A) TAXABLE										(B) TAX EXEMPT									
		POINT SPREAD BETWEEN TUITION AND RETURN										POINT SPREAD BETWEEN TUITION AND RETURN									
		0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
		PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT
NJ MATRICULATION %	RATE OF RETURN																				
70	3	104	99	94	90	86	82	78	74	71	67	100	96	91	87	83	79	75	72	68	65
	4	104	99	94	90	86	82	78	74	70	.	102	97	93	88	84	80	76	73	69	.
	5	104	99	94	90	86	82	78	74	.	.	104	99	94	90	85	81	77	74	.	.
	6	104	99	94	90	86	81	78	.	.	.	105	100	95	91	87	82	78	.	.	.
	7	104	99	94	90	86	81	.	.	.	.	107	101	97	92	88	83	.	.	.	.
	8	104	99	94	90	85	.	.	.	.	.	108	103	98	93	89	.	.	.	.	.
	9	104	99	94	90	.	.	.	.	.	.	109	104	99	94	.	.	.	.	.	.
	10	104	99	94	.	.	.	.	.	.	.	110	105	100	.	.	.	.	.	.	.
	11	104	99	.	.	.	.	.	.	.	.	112	106	.	.	.	.	.	.	.	.
	12	104	.	.	.	.	.	.	.	.	.	113	.	.	.	.	.	.	.	.	.
80	RATE OF RETURN																				
	3	102	97	93	89	84	80	77	73	69	66	98	94	89	85	81	77	74	70	67	63
	4	102	97	93	89	84	80	77	73	69	.	99	94	90	86	82	78	74	71	67	.
	5	102	97	93	88	84	80	76	73	.	.	100	95	91	87	82	78	75	71	.	.
	6	102	97	93	88	84	80	76	.	.	.	101	96	92	87	83	79	75	.	.	.
	7	102	97	93	88	84	80	.	.	.	.	102	97	92	88	84	80	.	.	.	.
	8	102	97	93	88	84	.	.	.	.	.	103	98	93	89	84	.	.	.	.	.
	9	102	97	93	88	.	.	.	.	.	.	103	98	94	89	.	.	.	.	.	.
	10	102	97	93	.	.	.	.	.	.	.	104	99	94	.	.	.	.	.	.	.
	11	102	97	.	.	.	.	.	.	.	.	105	100	.	.	.	.	.	.	.	.
	12	102	.	.	.	.	.	.	.	.	.	105	.	.	.	.	.	.	.	.	.

NEW JERSEY GUARANTEED TUITION PLAN
PERCENTAGE OF ACTUAL TUITION COVERED BY THE PLAN
AT VARIOUS RATES OF TUITION, RETURN AND NJ MATRICULATION
PLAN A RETURN -2x; PLAN B WITH 5x DISCOUNT
PAYMENTS INCREASED ANNUALLY AT THE TUITION RATE

....TABLE B.... PERCENT OF ACTUAL TUITION COVERED		PLAN OPTIONS																			
		(A) TAXABLE										(B) TAX EXEMPT									
		POINT SPREAD BETWEEN TUITION AND RETURN										POINT SPREAD BETWEEN TUITION AND RETURN									
		0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
		PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT
NJ MATRICULATION x	RATE OF RETURN																				
70	3	105	98	92	86	81	76	71	67	63	59	102	96	89	83	78	73	69	65	61	57
	4	105	98	92	86	81	76	71	67	63	.	105	97	91	85	80	75	70	66	62	.
	5	105	98	92	86	81	76	71	67	.	.	106	99	93	87	81	76	71	67	.	.
	6	105	98	92	86	81	76	71	.	.	.	108	101	94	88	82	77	73	.	.	.
	7	105	98	92	86	81	76	.	.	.	.	110	102	96	89	84	78	.	.	.	.
	8	105	98	92	86	81	.	.	.	.	.	111	104	97	91	85	.	.	.	.	.
	9	105	98	92	86	.	.	.	.	.	.	113	105	98	92	.	.	.	.	.	.
	10	105	98	92	.	.	.	.	.	.	.	114	106	99	.	.	.	.	.	.	.
	11	105	98	.	.	.	.	.	.	.	.	115	107	.	.	.	.	.	.	.	.
	12	105	.	.	.	.	.	.	.	.	.	116	.	.	.	.	.	.	.	.	.
80	RATE OF RETURN																				
	3	103	96	90	84	79	74	70	65	62	58	99	93	87	81	76	71	67	63	59	56
	4	103	96	90	84	79	74	70	65	62	.	101	94	88	82	77	72	68	64	60	.
	5	103	96	90	84	79	74	70	65	.	.	102	95	89	83	78	73	68	64	.	.
	6	103	96	90	84	79	74	70	.	.	.	103	96	90	84	78	74	69	.	.	.
	7	103	96	90	84	79	74	.	.	.	.	104	97	90	85	79	74	.	.	.	.
	8	103	96	90	84	79	.	.	.	.	.	105	98	91	85	80	.	.	.	.	.
	9	103	96	90	84	.	.	.	.	.	.	105	98	92	86	.	.	.	.	.	.
	10	103	96	90	.	.	.	.	.	.	.	106	99	93	.	.	.	.	.	.	.
	11	103	96	.	.	.	.	.	.	.	.	107	100	.	.	.	.	.	.	.	.
	12	103	.	.	.	.	.	.	.	.	.	107	.	.	.	.	.	.	.	.	.

APPENDIX C

The Massachusetts College Saving Plan:

Preliminary Report

of the

Massachusetts Board of Regents

Committee on Tuition Prepayments

July 1, 1987

prepared at the request of

Governor Michael S. Dukakis

Committee Members

David Bartley, President
Holyoke Community College

John Brazil, President
Southeastern Massachusetts University

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**The AICUM was formerly represented on this committee by Frank A. Tredinnick, to whom the committee is grateful for assistance in its early deliberations.

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EXECUTIVE SUMMARY

The financing of higher education is a mutual undertaking of families, colleges and universities, and the Commonwealth. Increasing the amount of saving by parents for higher education is an important goal of the Commonwealth. Parents are often discouraged from saving by the daunting prospect of high costs and uncertain financial returns from investments. Recognizing the problems families face, Governor Dukakis committed the Commonwealth to examine alternative ways to help families in their efforts to prepare financially for their children's higher education. At the request of the Governor, the Chancellor and the Board of Regents appointed a committee to study savings and tuition prepayment plans. Meeting through the spring of 1987, the committee developed this preliminary report outlining a specific two-part plan.

This plan is explicitly designed to help middle-income parents to save more effectively for college expenses. Middle-income families, who pay the bulk of taxes supporting state services, have little prospect of receiving direct financial aid assistance for college. They also have few well-defined mechanisms for accumulating savings to pay for college costs. This plan is designed to provide such a mechanism. The plan has been designed so that small contributions can be accommodated, to make the program as accessible and useful as possible to all Commonwealth families. However, it is unrealistic to think that any savings-oriented plan will be of much help to parents whose financial situation makes it difficult to accumulate savings on a sustained basis. It is very important, therefore, that this plan not be viewed as a financial aid program, and that it not compete for funding with financial aid programs designed to assist low-income families. The need for financial aid is explicitly addressed by the extensive scholarship programs of the Commonwealth.

The proposal presented here is not the committee's final recommendation. Rather, it is offered as a basis for wider discussion among the committee, state higher education policy makers, college and university leaders, and concerned individuals from other agencies and organizations. Though this work is preliminary, it is presented in a specific and detailed form to facilitate the kind of concrete discussion that must take place to refine these ideas further.

The Plan

The proposed plan consists of two separable parts. Either part can stand on its own, but if both parts are adopted they can also be linked.

A. **Commonwealth College Bonds.** A small denomination zero coupon tax exempt bond series (similar in form to federal EE savings bonds) would be issued by the Commonwealth. The bonds would be sold at the current market rate of interest. If a bond in this series is redeemed to pay for college costs of a Massachusetts resident, the Commonwealth would supplement the yield of the bond by an additional 1 percent annually. Thus, a bond issued at 6 percent compounds at 7 percent if redeemed for college expenses. (The proceeds of these bond issues would be available to the Commonwealth for use in capital projects in higher education.)

B. **Tuition Prepayment Certificates.** The Commonwealth will form a nonprofit trust to issues tuition certificates in denominations of $50 and higher. The certificates may be redeemed at participating public and independent institutions for specified fractions of a year of tuition and fees. Since the tuition charges at colleges differ, a given certificate will buy differing amounts of tuition at the respective campuses. The certificates are denominated in years of tuition, however, so the family will know exactly how much tuition it has purchased; no matter what happens to investment returns or to college costs, the certificates will always buy the same number of years of tuition at any given participating college. Parents will find this an attractive investment because it reassures them that increases in tuition will not erode the value of their efforts to save for college. The plan includes reasonable provisions for withdrawal.

This plan provides a way for families to pay future tuition at a considerable discount. If tuitions continue to rise as fast as they did in the recent past, then over the next 16 years today's $10,000 college education will rise in cost to over $30,000. This program enables families to buy that $30,000 education for its current, $10,000 price tag -- less than one-third of the cost they will face if they wait and try to pay college bills as they come due. If they phase their purchase of education over the years before college (rather than making it all at once a number of years before college), the discount will be smaller but still substantial.

Parents will present the tuition certificates to the participating colleges and universities in lieu of tuition payment. The institutions redeem the certificates from the Trust, receiving the appreciated value of the original funds. The investment of the funds will be managed by a committee drawn primarily from participating institutions.

The investments will be managed so that the invested funds are expected to grow rapidly enough to cover tuition charges and

administrative expenses. There are several reasons why the Trust will be in a better position to invest the funds than most families. These include the ability to take a longer investment perspective, access to the better financial advice, and (possibly) tax advantages.

In spite of this investment edge, college administrators will understandably be concerned that in any given year, they may be exposed to an unacceptable tuition shortfall. Recognizing this concern, the committee proposes that the Commonwealth guarantee a minimum level of appreciation. The current proposal is that the Commonwealth guarantee that for institutions with only modest tuition increases, tuition growth will not exceed fund appreciation by more than two percent annually. (The Commonwealth would seek to recoup any payments under this guarantee from prior or subsequent tuition payments made by the Trust in excess of the actual current tuition charges of participating institutions.)

C. **Transfer of Savings.** Families may use Commonwealth College Bonds to purchase Tuition Prepayment Certificates at any time and still retain the special interest supplement.

The committee believes that this plan is unique. It is quite different in concept from all other state plans currently being considered. The Commonwealth would take a unique role in higher education. Independent colleges can participate fully with public institutions. The plan can easily be extended to include institutions in other states. The committee believes that the plan can provide a sound and effective investment vehicle that will promote college savings in the Commonwealth. We invite detailed comments on this proposal.

I. INTRODUCTION

A. The Need

The burden of paying for college is an increasingly daunting prospect for parents in the Commonwealth. Yet the future of Massachusetts' economy and even our social fabric will be profoundly influenced by the quality of education we provide our children. Until recently, parents could look forward to a firm partnership with the federal government, the Commonwealth, and colleges for the provision of funding for higher education for qualified young men and women. Increasingly, however, the federal government is limiting its role, and college administrators find financial aid dollars stretched ever further. The Commonwealth, through support of state institutions of higher education and through its financial aid program for residents, has substantially expanded its efforts to assure that all qualified students will have access to high quality institutions. Nonetheless, the burden felt by parents of college-age students is real.

If high quality education is to continue to be widely available,

then parents, colleges and universities, and the Commonwealth will have to tap all available resources effectively. Although schools will still make every effort to increase the availability of financial aid, and the Commonwealth's support of higher education will also grow, families with the capacity to make a contribution to the costs of their children's higher education will inevitably be asked to shoulder a significant part of the burden.

Under the economic conditions of the 1980s, many parents are finding this increasingly hard to do. Other spending demands — the rising costs of shelter, medical care, and other necessities — make it difficult to save. But even those who manage to set aside some funds are faced with bewildering financial decisions. Investments offering high yields are risky. Taxes absorb a portion of investment return, often reducing the real earnings (earnings after inflation) to zero or turning them negative. These conditions are likely to continue into the foreseeable future. Finally, college costs are rising quickly, regularly outpacing parents' capacity to earn aftertax returns on their investments. Although this cost increase may not continue at its recent pace, the possibility is enough to frustrate many parents and even dissuade some from preparing for future college costs.

B. Alternative Approaches

In the last year, many suggestions have been raised about how parents might be encouraged or assisted in saving more effectively. Some have argued for savings plans. That is, the Commonwealth might design a program which encourages families to set aside funds in financial or other assets during the years prior to college attendance. Although there are risks to the family that the assets will not appreciate, after taxes, at a satisfactory rate, this is where the burden of risk customarily has rested; the relationships and the risks are understood. A plan which encourages families to add to their savings for college would, if it succeeds, reduce the future need for Commonwealth and private college financial aid.

Others have suggested that state institutions (as a group) or individual private colleges permit prepayment of tuition so that parents could be assured that the growth in college costs will not outpace the appreciation of their savings. This would shift investment risk from families to colleges and the Commonwealth. <u>There are several important reasons to effect this shift in risk taking</u>. Many families who want to save for higher education have had a relatively short time horizon. Unless savings occurs before an infant is born, the maximum duration is

17 or 18 years. (For too many families the period of saving may only be five to ten years.) This accumulation period may occur during years in which the financial markets are in retreat, resulting in a depreciation of the saved funds. Moreover, with a short investment horizon, family financial strategies are severely constrained. For example, parents trying to save for the prospective college education of their children may justifiably be frightened by the risks associated with investment in stocks. Yet history is clear: the return to equity investments, although certainly more erratic, far exceeds the return on fixed income securities.

Institutions, or some financial umbrella organization, are in a better position to take the more advantageous long term investment perspective with the expectation that some periods will produce losses and others will yield offsetting gains and more. Furthermore, with a large enough accumulation of funds, the investment managers can diversify the investments and hire specialized financial talent. It may even be possible to design a fund which specifically hedges against cost increases in higher education. Finally, families pay tax on most earnings in spite of the fact that some of the "earnings" may simply be compensation for inflation. This taxation makes it more difficult for families to achieve a positive return on tuition savings after adjustment for taxes and inflation. It should be possible to construct a prepurchase arrangement in which income taxes are reduced or

eliminated. (See Appendix A for a discussion of the financial risks and Appendix B for a brief review of the tax issues.) Obviously, though, a prepayment program will not be nearly as simple nor straightforward as a savings plan.

Regardless of the approach used, if an effective way can be found to increase the amounts parents in the Commonwealth put aside for higher education and to protect those savings from erosion as college costs continue to rise, the returns to students, parents and the Commonwealth will be very high. As an investment in our future, the education of our children bears fruit for all. Keeping quality education within the reach of hard-pressed parents would be an enormous service.

C. Appointment of the Committee

Governor Dukakis, recognizing the problems families face in preparing financially for college, the value to the Commonwealth in assisting them, and the difficulties in creating a truly effective plan, announced in October 1986 that the Commonwealth would undertake a review of the problem. The purpose was to formulate a plan that would help families prepare more effectively for carrying their part of higher education costs. The Committee on Tuition Prepayment was appointed in

the winter of 1987 by the newly appointed Chancellor, Franklyn G. Jenifer, and the Board of Regents. The Committee is organized as a subcommittee of the Board of Regents Task Force on Student Financial Aid. The committee will report its findings and recommendations to the Task Force, to the Chancellor and Board of Regents, and to the Governor. The committee includes representatives from public and independent institutions of higher education, and from the financial and legal communities. Ex-officio members include representatives from the executive and legislature. The meetings were open and were attended by representatives of a variety of Commonwealth agencies and private organizations. The Committee was assisted in its work by outside consultants familiar with higher education financing issues and by the staff of the Board of Regents.

Meeting six times over the course of the spring of 1987, the Committee on Tuition Prepayment examined a wide range of options. It considered pure savings programs (intended to assist parents in saving but not removing the investment risk from them) as well as pure tuition prepayment plans (designed to insure that the growth in college costs will not outpace the earnings on the funds that parents put aside).

D. This Report

The Committee made considerable progress in identifying the criteria by which a program should be judged and in examining and evaluating alternatives. Although it has not reached final conclusions, the Committee has arrived at a point where wider discussion of its preliminary recommendations would be useful. The Committee consists of knowledgeable individuals with a wide diversity of backgrounds and exposure to higher education, but it was not designed to be fully representative. At this point in its deliberations, the Committee believes that hearing wider reaction to its preliminary ideas would aid it in developing final recommendations for a plan. Accordingly, it has decided to issue a preliminary discussion of its findings at this time.

This report presents a preliminary proposal designed to be the basis for a wider discussion. It is in no sense a final recommendation. Although the Committee believes that it would be useful to have wider reaction to these proposals, and has agreed that this proposal is of sufficient interest to merit further exposure, final discussion of the details of these suggestions has not yet begun. The Committee intends to use this preliminary report to obtain more concrete, detailed, and definitive reactions from others, and to use it as a basis for beginning

a wider policy discussion. The Committee will then continue its deliberations on the basis of the advice it receives in this process.

II. CRITERIA

The Committee reviewed reports from various states and national organizations. The criteria the Committee used were drawn from a variety of sources, but those listed in a memorandum from the National Association of Independent Colleges and Universities were particularly useful. The Committee believes that there are key characteristics that any plan, savings or prepayment, must have:

The plan should help middle-income families. The purpose of this plan is to assist middle income families in saving more effectively toward the goal of paying higher education costs. To make it as accessible and useful as possible for all families in the Commonwealth, however, the plan should permit investments in as small a denomination as is administratively feasible. The committee hopes that is will be possible to permit investments as small as $50 at a time.

The plan should not be financial aid. It is unrealistic to expect that a savings-oriented plan will be of much help to families who are unable to make a sustained effort to accumulate savings. Though the plan will be made as accessible as possible to low-income families by permitting investments in small denominations, this program should not be seen as addressing the needs of low-income students. This is not a financial aid plan; rather, it is a plan that should reduce the need for financial aid for students of moderate means whose families will be able

to make a larger contribution to their college costs if they save more effectively. This program must not be viewed as financial aid, and it must not be allowed to supplant financial aid programs for low-income students or to compete with need-based financial aid programs for funding.

The plan should promote access and choice. Broad institutional choice by students should be preserved. As a result, the saved funds and those committed for prepurchased tuition should, to the extent possible, be available for use at any institution in the country.

The plan should share risk appropriately. Risks must be shared equitably among families, participating institutions, and the Commonwealth. Whoever assumes financial risk — families, institutions, or the Commonwealth — must also stand to benefit proportionately if there are financial gains. Furthermore, if there is a Commonwealth subsidy involved, there will have to be comparable benefit to the Commonwealth and the public at large.

The plan should be simple. The plan must be simple enough to be easily understood by families and institutions.

A more complete discussion of the Committee's criteria may be found in Appendix C.

III. THE PROPOSED PLAN

The Committee reviewed a variety of savings as well as prepayment options. Five plans were examined in some detail; three were savings plans and two were of the prepayment variety. The savings plans included a Commonwealth IRA-like account, a vehicle using

single premium life insurance, and the sale of zero coupon tax exempt bonds. The prepayment options included a Full Prepayment Plan (similar to the plan legislated in Michigan) and a tuition certificate approach.

The IRA-like account was rejected because the Committee believed it would be difficult to induce new savings when the incentive was only freedom from Commonwealth taxation. The Single Premium Life Insurance form was set aside because of its limited nature and the belief that it could be provided without Commonwealth involvement. Finally, the Full Prepayment plan was considered too rigid for the variety of institutions and the multiplicity of enrollment patterns of Commonwealth residents. (A more complete description of these plans is presented in Appendix D.)

A savings idea that has not been tried, but which has appeal, is the use of small denomination zero coupon bonds. These bonds are relatively easy to understand and the clear exemption of the interest from federal taxes under current law is an attractive feature.

A carefully crafted prepayment plan also appears to have economic merit. Families seem to react very favorably to the certainty of having tuition prepaid. Michigan has received 24,000 inquiries from residents since their plan was first announced; Duquesne reported

having more than 600 participants in the first year of offering prepaid tuition. The Committee was attracted by the flexibility of the certificate plan, and it was selected for further development. Although it is certainly more complicated to implement than the bond plan, the basic concept of the certificate approach is relatively easy to comprehend. Most important, independent institutions in and out of Massachusetts can participate.

The Committee has worked carefully on the development of these plans. It was not possible — nor did it seem to us desirable — to resolve all the details of these plans during the relatively short period of time the Committee has met. There is a good deal of expertise in the higher education and the investment banking communities that should be tapped to refine these proposals and to better understand the attendant problems. It may also be useful to enter into discussions with other states about a joint approach. On the other hand, the Committee felt it was important to offer as detailed a set of recommendations as possible as a stimulus to discussion. It is in this context that we offer the following plans for further development.

A. Commonwealth College Bonds

1. Overview. In this bond plan the Commonwealth would

reserve a portion of its General Obligation bonds each year for sale to families saving for higher education. These bonds, like all General Obligation bonds of the Commonwealth, would be exempt from state and federal taxes. This portion of the bonds would be sold in small denominations and issued without interest coupons (that is, they would be "zero coupon" bonds). The interest is accumulated and paid at maturity. When bonds are issued in this form, the saver does not need to reinvest semiannual interest payments. The bonds would be issued at prevailing interest rates but, if the bonds are redeemed for college expenses, the Commonwealth would pay a higher interest rate: one percent above the issuance market rate. It is assumed that this extra yield and the availability of small denomination bonds will induce more families to save for college.

The advantages of this proposal are that: (1) it is simple; (2) it will improve choice because families will have more funds and these funds will be portable; (3) although there is some concern that the funds might not grow as fast as tuition, the bonds are a relatively safe investment; (4) the small denominations should be suitable for families with modest extra cash; and (5) the proceeds of the bond issues would be available to the Commonwealth for use in capital projects for higher education. The disadvantages are that: (1) it may be costly to get the bonds into the hands of savers; and (2) the interest subsidy necessary

to induce new savings may also be costly. In spite of these cost questions, this approach appears worthwhile. For a family with modest resources, these bonds would provide access to a standard tax-exempt investment and would provide added incentives that it be held to maturity and used for college expense.

2. Proposed Bond Features

a. **Denomination.** The bonds will be in small denominations ($50 and up) for the convenience of savers with limited funds.

b. **Form of Bonds.** The bonds will be in "zero-coupon" form so that savers will not have to reinvest interest. The bonds will have fixed face values but the price paid will depend upon the date of maturity and the market rate of interest on the date of issue.

c. **Appearance.** The Commonwealth College Bonds will be similar in appearance to United States EE Savings Bonds and will be sold through existing retail financial institutions.

d. **Named Beneficiary.** The bonds will be registered in the name(s) of prospective college student(s) (that is, beneficiaries will have to be named at the time of investment). The bonds can be transferred to another family member.

e. **Eligibility.** The bonds are intended to assist in saving for the higher education of Massachusetts residents wherever they attend college. (The basic rules that determine residency under Massachusetts' general scholarship program will be used to assess eligibility for the interest supplement.) Thus, if a relative out of the state purchased the bonds for a Massachusetts resident, the accumulation would include the special supplement.

f. **Yield.** The yield on the bond, if redeemed for cash, will be the market rate of interest at date of issue.

g. **Redemption with Commonwealth Supplement.** If, when a bond matures, it is redeemed through a college for a named beneficiary, the Commonwealth will add a supplementary payment that will raise the rate of return by one percent -- for example, from 6 percent to 7 percent.

h. Funding of Supplement. To fund the supplementary interest payments, the Commonwealth will appropriate an amount sufficient to cover the incremental interest when due.

i. Conversion to Tuition Certificates. The accumulated value of these bonds, including the supplement, can be converted at any time for tuition certificates. The interest supplement will be prorated for the period the bonds have been held and included in their calculated value when making the conversion.

B. Prepaid Tuition Certificates

1. Overview. The Commonwealth would establish a trust to sell tuition at all public colleges and universities. Independent institutions, at their choosing, could also participate by agreeing to provide education to certificate-holders in exhange for redemption of the certificates by the Trust.

The trust will issue Tuition Certificates in denominations of $50 and up. The tuition values will be printed on the reverse side of each certificate — for example, a $1,000 certificate might purchase 0.10 years at Clark University, 0.12 years at Bradford, 0.9 years at Fitchburg State, and so on. The conversion values for certificates issued in any given year are determined by the tuition charges in that year. Thus, a $1000 certificate purchased in 1987 will pay for more tuition than a $1000 certificate purchased in 1990.[1]

A family purchases as many certificates as it wishes. The accumulation may be regular, possibly through a payroll deduction, or whenever family finances permit. When it is time to attend a college,

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[1] Only standard undergraduate tuition will be listed on the certificate. A complete listing of covered tuition (e.g. graduate tuition and other special tuitions) will be published in a catalog.

the family can determine how much tuition it has prepaid at each institution. The family submits the certificates to the college bursar in lieu of some or all of its tuition and fee payments. The college submits the certificates to the fund for reimbursement. If the family member enrolls in a nonparticipating institution, the fund will issue payment, with appreciation, to that college. If the family decides not to use the funds for higher education, it can receive a cash refund, but a smaller amount than it would receive if the funds were used for education.

The college submits the certificates to the trust and withdraws a portion of the invested funds. The certificates function like shares of a mutual fund. The investments are managed (like an endowment or pension fund) by a committee which is elected by all participating institutions.

The certificate plan has the advantages of full prepayment plans (like that adopted by Michigan). It is, however, far more flexible. Independent institutions can, if they wish, participate fully. Graduate and other tuition charges can also be accommodated. In addition, the sale of certificates in a variety of denominations permits families with limited extra funds to purchase some tuition. Of course, transferring the risk that investments will not grow as fast as tuition does not make it disappear; the risk is shifted to colleges and the Commonwealth.[2]

[2]However, the trust's challenge of making the funds grow as fast as

Some students whose families have invested on their behalf through the certificate plan may wish to attend institutions that are not participating. An important choice to be made in setting up such a plan, therefore, is providing a cashout provision which is fair to families who want to send a son or daughter to a nonparticipating institution but which also fairly apportions risk and reward to participating and nonparticipating colleges.

The most significant difficulty with a prepaid tuition plan is the risk it creates to participating institutions. If college costs rise dramatically in spite of the best efforts of institutions to control them, or if the investments chosen by the plan's trust managers perform poorly, colleges face the prospect of having to deliver educational services in return for tuition certificates whose value is below what they would otherwise charge to their students. Of course, in this case the program has been particularly helpful to parents, who will be able to pay for tuition by redeeming their certificates — if they had

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(continued)
tuition should be achievable. Most colleges assume that their tuition will rise about 2 percent above the CPI and that their endowment will grow faster than tuition. Other investment funds (pensions, mutual funds, and so on) have also maintained positive real rates of return over long periods. Furthermore, by imposing modest penalties on families who withdraw funds for other than educational use, appreciation for tuition payments can be enhanced.

invested the funds themselves and experienced poor returns as compared to the growth in college costs, they would have been less able to afford any higher education. Moreover, competent management of the investments should result in colleges receiving, on average, higher tuition through certificate redemption than they are charging students without certificates. Nonetheless, the prospect that colleges might have to redeem certificates whose value had not appreciated enough to offset increases in college costs presents a risk to participating institutions.

To help overcome this problem, the Committee's preliminary recommendation is that the Commonwealth share in the financial risk. We suggest that the Commonwealth provide a minimum rate of return guarantee (with the minimum depending on the rate of increase of college tuition and the CPI). Under this guarantee, the Commonwealth would make payments when investment returns and college cost increases diverge severely, and the Commonwealth would recover any losses out of prior or subsequent excess gains by participating institutions. With relatively small risk to the Commonwealth, state participation would offset downside risks that might otherwise deter private institutions from joining the plan.[3]

Many details of this plan still need to be worked out with

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[3]Appendix A provides a more complete discussion of costs and risks.

participating institutions and with state policy-makers, and comments on these details are invited. The Committee believes that further refinement of these suggestions will result in a plan that should be included in Massachusetts' effort to assist families in saving for higher education.

2. Certificate Plan Features — Family Participation

a. Admission. Participation in the plan has no effect on admissions decisions.

b. Use at Participating Institutions. Families use the Certificates as tuition vouchers, turning them in for the stated tuition value.

c. Transfer. Certificates may be transferred to other immediate family members.

d. Cashout Provisions. Under certain circumstances the family may wish to return the Certificates to the Trust for a refund. The Trust will have three refund policies as follows:

(1) In the event of death or disability of the beneficiary or if the family faces financial hardship, the refund will be the appreciated value of the original prepurchase amount.

(2) If the beneficiary attends a nonparticipating institution, the refund will be for the lesser of the appreciated value of the original payment or an amount based on the compounded average increase of tuition and fees at participating institutions.

(3) If cashout occurs for other reasons, an annualized return will be determined using the formulation in (2) above. This annual return will then be reduced two percentage points and applied to the original prepurchase amount.

3. Certificate Plan Features — Institutional Participation

a. Participation by Independent Colleges. Participation by independent institutions is invited. If a college elects to participate, it will annually submit a list of tuitions for which the certificates may be used. These tuitions may include graduate and professional education.[4]

b. Investment Management. The prepaid tuition is invested by fund managers who are selected and directed by an investment committee. The investment committee is elected by the participating institutions.

c. Certificate Redemption. When a certificate is submitted to an institution in lieu of tuition, the institution resubmits it to the Trust for a pro rata share of the invested funds.

d. Withdrawal. Institutions may withdraw from the plan but must honor certificates issued while they were participants.

4. Certificate Plan Features — Commonwealth Participation

a. The Trust. The Commonwealth will charter a Private NonProfit Trust to administer the Tuition Certificates. (The Commonwealth may enter into discussions with other states regarding their potential involvement and the appropriate organizational structure for the Trust if a multistate plan should evolve.)

b. Participation in Trust Management. The Commonwealth will be represented on the advisory board and the investment committee of the Trust.

c. No Tax of Trust. The Commonwealth will not tax the Trust's appreciating assets nor the distribution of those assets if used to pay college bills.

d. Establishment of Reserve and Operating Fund. The Commonwealth will provide an interest free loan to the Trust to establish an operating reserve for the first year. Administrative costs will subsequently be paid out of a fee charged against Trust earnings.

e. Trust Guarantee. The Commonwealth will use its resources to

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[4]A rules committee (selected by participating institutions) will be established to settle pricing, and other, issues. For example, if new fees are established after certificates have been sold, the rules committee will determine if those charges were included in the original tuition.

partially protect participating institutions from losses which could occur if invested funds do not grow as fast as tuition. This guarantee would operate as follows:

(1) If a participating institution's real annualized tuition increase[5] (during the period the Tuition Certificate was held) is two percent or less, then the guaranteed minimum rate of return on the invested funds is 2 percent less than the annualized nominal tuition growth.

(2) If a participating institution's real annualized tuition increase is greater than 2 percent, then the guaranteed minimum rate of return on the invested funds is the annualized CPI growth.

This guarantee can be stated arithmetically as follows:

Let TI be the rate of increase of tuition,
CPI be the rate of increase of the consumer price index,
and MROR be the guaranteed minimum rate or return.

Then:

(i) if TI - CPI < 2 percent,

then

MROR = TI - 2 percent;

(ii) if TI - CPI > 2 percent,

then

MROR = CPI.

The following table illustrates the guaranteed minimum rate of return under various conditions of tuition and consumer price increases:

Rate of Tuition Increase	Rate of Consumer Price Increase	Gtd Minimum Rate of Return

[5]The real annualized tuition increase is the difference between the compounded rate of increase in tuition and the compounded rate of increase of the Consumer Price Index.

(percent per yr)	(percent per yr)	(percent per yr)
8	5	5
7	5	5
6	5	4

Note: The committee recognizes that for budgetary reasons this formula may have to be adjusted. However, the committee supports a guarantee formula which uses this basic approach. For the purposes of this report, both the structure and the specific parameters of the guarantee outlined above have been assumed.

(3) Whenever a Tuition Certificate is redeemed by an institution, any gain or loss (the difference between the fund appreciation and tuition growth) will be debited to an institutional record. The Commonwealth will make no payments under its rate of return guarantee to an institution that has a positive balance on its record. Similarly, after the Commonwealth has made a guarantee payment to a particular institution, all future excess gains by that institution will first be used to reimburse the Commonwealth for payments under its guarantee.

Exhibit 1 provides an example of how this guarantee might have worked in the 1970s; Charts 1 and 2 present a graphical summary.

f. Administration of Certificate Sales. The Prepaid Tuition Certificates, like the bonds, will be sold through existing retail financial institutions.

C. Administration

There will be administrative and marketing costs associated with both the Commonwealth Bond and the Tuition Certificate parts of this proposal. The committee believes that efficient administration and

EXHIBIT ONE -- EXAMPLE OF COMMONWEALTH GUARANTEE

A family bought a $2,150 certificate in 1971. In that year, that amount of money would have purchased one full year of tuition at a Massachusetts independent college. By 1986 it would have grown to $8,274 -- a compound growth rate of 9.40 percent.[5] Over this period tuition at Commonwealth independent colleges increased at a compound rate of 9.23 percent. The average tuition charged in 1986 was $8,080. The CPI grew at a rate of 6.81 percent.

Chart 1 compares the growth in invested funds with the tuition increases over the period. It also shows the Commonwealth supplement that an independent college (charging average tuition) would have received.

In 1972 and 1973 the invested funds appreciated faster than tuition and, if the $2,150 certificate had been redeemed, institutional receipts would have been greater than had tuition been paid in cash. In 1974, however, there was severe inflation. The capital markets reacted, stocks fell over 18 percent. The $2,150, which had grown to $2,460, fell in value to $2,010. If a family had cashed in the certificate in 1974, the Commonwealth would have had to add $360. These potential Commonwealth additions continue through the seventies as the stock market struggled to recover and tuition increases were in the 6 to 7 percent range and in line with inflation.

In the 1980s tuition increases soared into double digits -- outracing inflation by 5 to 11 percent. As a consequence, in spite of an improving stock market, a typical independent college would have received less from that 1971 certificate than from cash matriculants. Moreover, because the compound growth of the investment is generally in line with inflation in this period, the Commonwealth would not have added funds except in 1982 when the stock market stuttered. In 1986 the appreciated value of the $2,150 certificate again exceeds average tuition.

This example must be considered illustrative of the guarantee and not indicative of the performance of the certificates nor the exposure of the institutions. This example is sensitive to many factors, one of which is the year of purchase. If that same family purchased a certificate for average independent tuition in 1974, the value of the certificate would have equaled or exceeded average tuition charges in every year but three between 1974 and 1976. (See Chart 2.)

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5. This assumes the funds were invested in a stock index fund. Different investment scenarios would obviously provide different results.

CHART 1

Annual Value of 1971 Prepayment

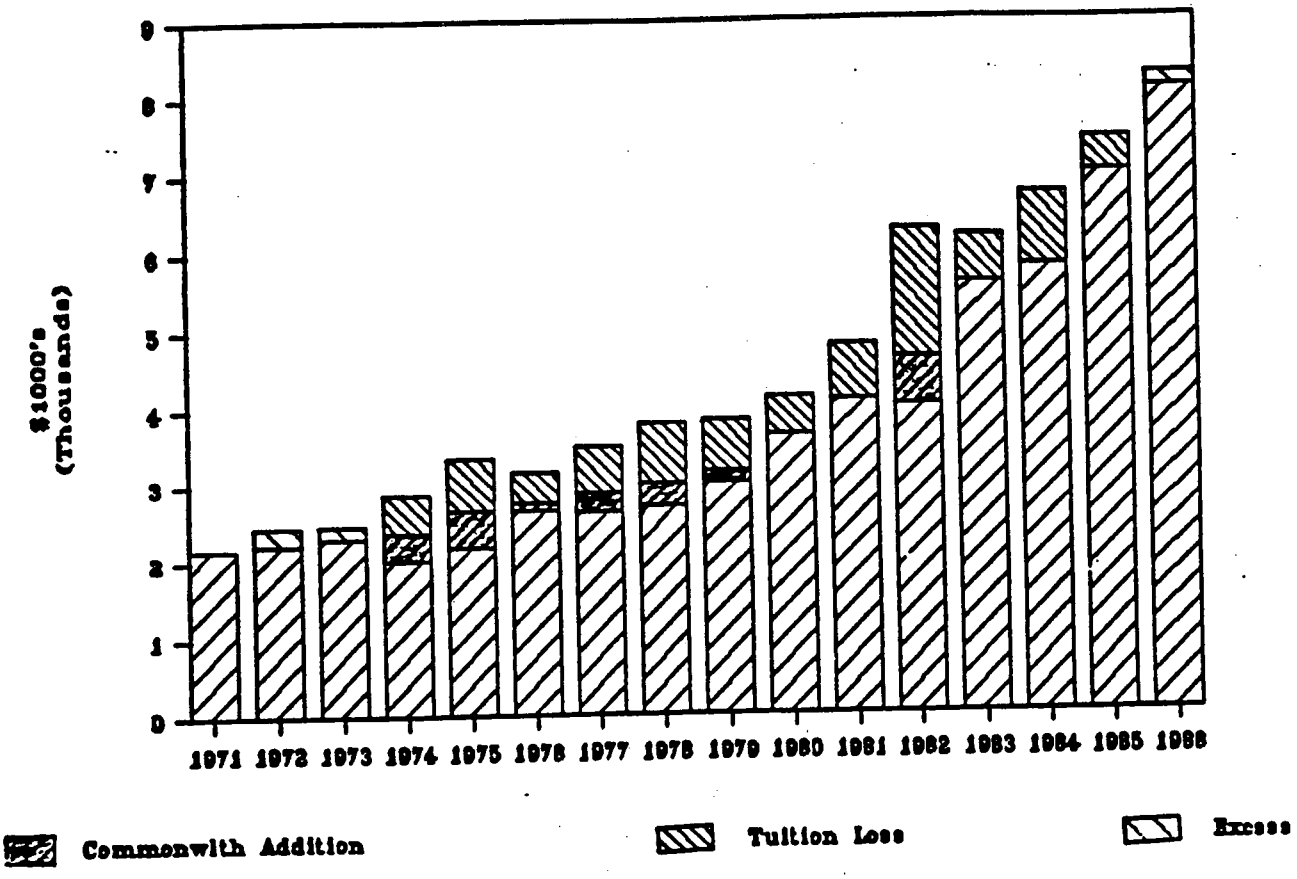
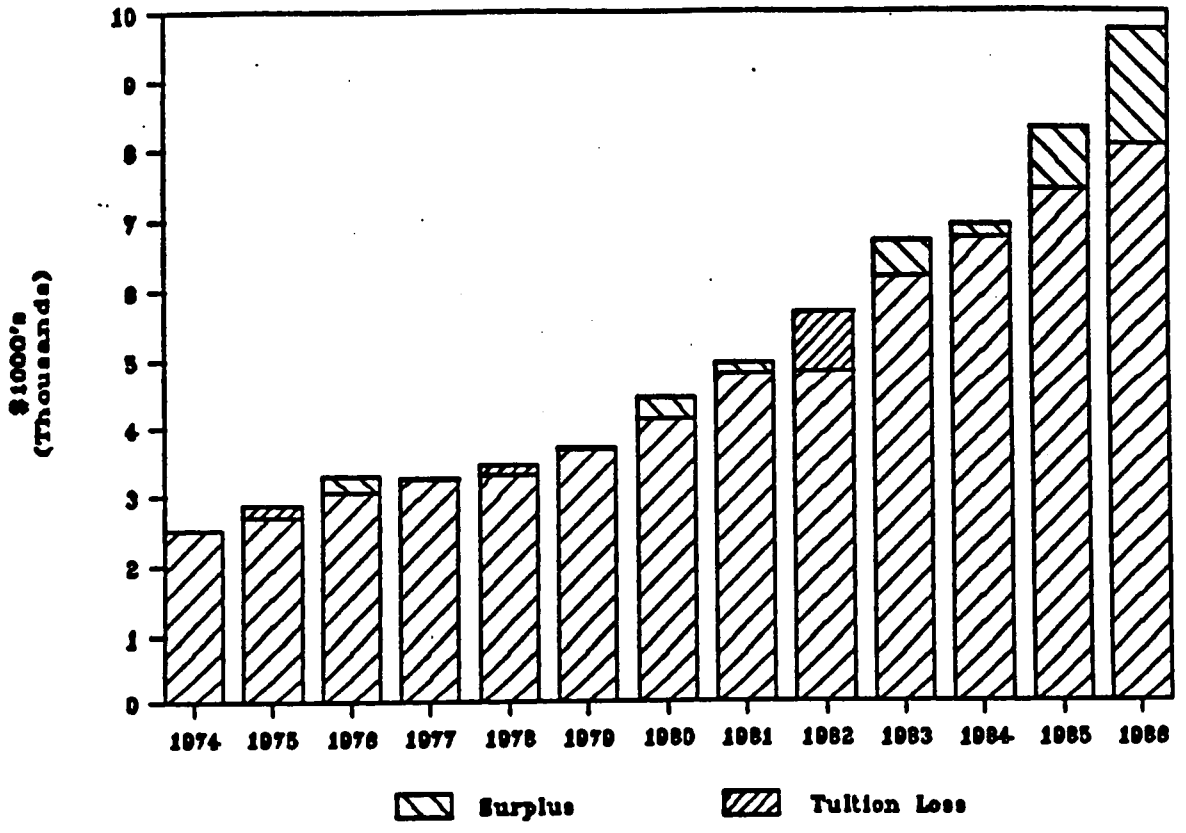


CHART 2

Annual Value of 1974 Prepayment



effective marketing of this program is central to achieving its potential for the Commonwealth. The committee has not entered into detailed discussion of either administration or marketing, but has formulated several tentative views. First, since the Commonwealth Bond part of the proposal involves direct sale of Commonwealth bonds, it will probably have to be administered directly by a state agency (though sales at the retail level can be conducted through financial institutions). Second, the form of the Tuition Prepayment TRust probably lends itself most readily to administration within a public authority or non-profit organization. The committee is reluctant to suggest the formation of a new public authority for this purpose, and would therefore like to explore the possibility of establishing this function within an existing authority.

Finally, the committee believes that the program will lend itself to aggressive and creative marketing. This may include establishing payroll deduction mechanisms, encouraging Commonwealth businesses to offer matched payroll deductions for this program as an employee benefit, encouraging grandparents and others to use this vehicle as a device for saving for the college education of their grandchildren, and encouraging other organizations to use Tuition Certificate or Commonwealth Bond investments as awards, prizes, and promotional benefits. While the committee has no intention of trying to design the

marketing strategy for the program, it believes that effective marketing of the program is important. Whatever organization is charged with administering the program must be capable of developing and fielding an appropriate but aggressive marketing campaign.

The committee is particularly interested in receiving comments about the administrative arrangements and marketing possibilities for the suggested program.

IV. CONCLUSION

Increasing the amount of savings that parents undertake for higher education is a very important goal for the Commonwealth. The circumstances and inclinations of parents, however, vary greatly. It is important that the Commonwealth's plan be attractive to as many parents as possible. At the same time, the plan should not expose institutions nor the Commonwealth to unacceptable risks. We believe that the two parts of the plan we have developed and presented in this preliminary report can provide an effective means for enhancing saving for college.

The committee has issued the results of its preliminary discussions in the form of specific and detailed proposed plans to invite comment by interested individuals and institutions. We chose to present the details of these plans not because they represent our final answer to how the plans should be constructed, but because we believe having specific plans on the table will facilitate having the discussion that will be necessary to refine these ideas further.

The committee intends to use this preliminary report in discussions with interested private and public institutions of higher education, members of the wider higher-education community of the Commonwealth, state legislators and executive policy-makers, administrative agencies, and other interested parties. Comments on this preliminary report are explicitly invited, and may be forwarded to the Committee through the Office of the Chancellor of the Board of Regents.

APPENDIX D

PRESENTATION
TO THE
MARYLAND TASK FORCE ON ALTERNATIVE FINANCING METHODS

by

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Deputy Director
Illinois Board of Higher Education

August 19, 1987

Mr./Ms. Chairman, Members of the Task Force.

Annual tuition increases, the uncertain outlook for student financial assistance, and competition among colleges for new freshmen have contributed to rethinking how families pay for college education.

A growing number of colleges, universities and state agencies have drawn up new and sometimes innovative payment and loan programs. In September of last year over 250 different plans existed to assist parents in financing tuition costs. Since that time an even larger number have been added. The array of tuition financing options offered range from gift certificates to the equivalent of the tuition futures market -- investing today's dollars for tomorrow's education. As a result, many colleges and state agencies find themselves providing a wide variety of family financial services for prospective students.

In May of 1986, the Illinois General Assembly passed a Resolution directing the Illinois Board of Higher Education to examine the suitability of a tax-exempt tuition investment plan for Illinois.

In the process we examined institutional plans and proposals being considered in other states. The plan receiving the most attention passed the Michigan legislature -- a program that for a child born today, parents would pay $8,000 to cover four years of tuition costs in the year 2004. Over 40 states are considering similar programs although only Michigan and 5 states have adopted one.

In examining the suitability of a program for Illinois, we looked at advantages and disadvantages for the family, advantages and disadvantages for the state; tax issues, organizational options and other economic and educational issues.

From the parents' perspective, an investment guaranteed to match increases in college tuition costs is quite attractive. On the other hand, an investment dedicated to a single purpose -- college education -- and not usable for retirement or other needs is not as attractive. Also, choosing a college for a child at an early age is risky at best, particularly if the number of participating institutions, public or private, is limited.

From the state's perspective, encouraging families to save, and start saving early, is of benefit because parents share the cost of a college education. Loan debt for college costs is increasing and many families need a cause or incentive to save. A state sponsored program could also promote enrollment in Maryland institutions. On the down side, the state must bear the unknown administrative expense and assume the financial risk that tuition will increase for unanticipated reasons and investment earnings will not keep pace.

The U.S. Internal Revenue Service has not yet ruled on the tax status of dividends in these programs. The resolution of this issue is critical to the suitability of these programs for many individuals. The handling of the investment for tax purposes is crucial since the new tax law eliminates many of the long used shelters for college savings.

There are a myriad of options for organizing and administering these programs. Program administration could result in the establishment of a new state agency, simply involve contracting with a private investment firm to administer the program, or even allow the parent to choose his own investments.

Organizational details must address both economic and educational factors. For instance, the number of institutions included in any proposal is highly significant. While including both public and private institutions may make the plan more complicated, it would provide more diversity in college choice to the student.

Technical details such as transferability of benefits to other children, transferability to other colleges, and withdrawal penalties will be important issues in program design.

The treatment of the savings programs' accumulations in the computation of student financial aid could also have direct impact on some families' decisions to participate.

It is clear that a host of issues will have to be considered in the design of a program.

One should not underestimate the difficulty and importance of balancing desirable features from the parent's perspective and from the state's perspective. For example, as a parent I want:

1. Purchases available in small denominations like U.S. Savings Bonds
2. The ability to enter the program at any point in my child's life
3. Other individuals to be able to invest for my child, e.g., grandparents
4. A guaranteed return on savings that keeps pace with tuition inflation
5. Flexibility to use the investment at any college or university at any location

6. Transferability to another family member

7. Exemption from all taxes, state and federal

8. Use of funds for purposes other than college without a penalty

9. A safe investment

On the other hand, if I represent a state entity or institution, I want:

1. Low start-up cost

2. Low administrative costs using current administrative structures

3. Minimal risk or liability to the state in case tuition rises faster than earnings

4. A plan that does not influence tuition rate setting (lower earnings would suppress rates whereas high rates allow them to grow)

5. Limitation of attendance to colleges and universities within the state

6. An educational component instructing parents

Designing any program is certainly a challenge. In Illinois, a Senate task force wrestled with this problem and examined four approaches to tuition investment - they never agreed on one.

The chart being distributed shows four approaches -- a trust approach as adopted in six states; an education IRA approach being considered in Illinois and Missouri; a tuition certificate approach used at Calvin College in Michigan, and being considered by Massachusetts; and our Illinois savings bond approach. I believe that our Governor will sign the savings bond bill into law this week at Youth Day at the Illinois State Fair.

Under the Illinois College Savings Bond approach, one of the state's bond sales would be structured to issue zero coupon college savings bonds rather than the regular state bonds which pay interest semi-annually and are sold to major investors in large denominations. The state usually sells bonds three times a year to raise funds for roads and capital construction.

Zero coupon bonds are sold at a discount and interest is paid only at maturity, e.g., a $5,000 bond would sell for $1,000 now but could be redeemed for $5,000 at maturity in 20 years. The bonds mature in 1 to 25 years and their income is exempt from federal and state taxes. Certainty of tax status is an important advantage.

Bond sales will be handled by an existing network of banks and investment firms similar to the groups that have handled past state bond sales. An important bonus feature is contained in the bonds -- bondholders showing evidence that the proceeds were used at a state college or university will receive an interest rate premium of 1/4 to 1/2 percent interest.

The bonds are also exempt from the Illinois student financial aid needs analysis so they are attractive to lower middle income families who may be eligible for the state's need-based financial aid program.

There are no penalties for early withdrawal so use of funds is very flexible even if the child does not go to college.

The program is not perfect; however, the purchaser is assuming that the bond's yield will grow faster than tuition. Exact denominations for issuance have not yet been set, but any bonds redeemable for less than $5,000 each will probably increase the state's underwriting costs.

In preparing a program for Maryland, it is important that you weigh all the issues involved, balance the needs of the individual and the state, consider various options open to you, and then select an approach most suitable to the needs of your state and its citizens.

AN ACT to create the Illinois College Savings Plan Act.

Be it enacted by the People of the State of Illinois, represented in the General Assembly:

Section 1. This Act shall be known and may be cited as the "Illinois College Savings Plan Act".

Section 2. The legislature hereby finds and declares the following:

(a) It is a fundamental goal of this State to provide education to develop all persons to the limits of their capacities, as provided in Section 1 of Article 10 of the 1970 Illinois Constitution.

(b) It is an essential function of State government to encourage attendance at institutions of higher education.

(c) Educational costs at institutions of higher education are difficult for many to afford and are difficult to predict in order to enable individuals and families to plan.

(d) It is in the best interest of the People of this State to foster higher education in order to provide well-educated citizens.

(e) It is in the best interest of the People of this State to encourage State residents to enroll in institutions of higher learning in the State.

(f) Students in elementary and secondary schools tend to achieve to a higher standard of performance when the payment of tuition for their higher education is secured.

(g) Providing assistance to assure the higher education of the citizens of this State is necessary and desirable for the public health, safety, and welfare.

Section 3. In light of the findings described in Section 2, the General Assembly declares the purposes of this Act and of the Illinois College Savings Plan Advisory Board created by this Act to be:

(a) To encourage education and the means of education.

(b) To maintain institutions of higher education in the State by helping to provide a stable financial base to these institutions.

(c) To provide wide and affordable access to institutions of higher education in the State for the residents of this State.

(d) To encourage attendance at institutions of higher education in the State.

(e) To provide students and their parents economic protection against rising tuition costs.

(f) To provide students and their parents financing assistance for postsecondary education.

(g) To help provide the benefits of higher education to the People of this State.

Section 4. (a) There is hereby created the Illinois College Savings Plan Advisory Board. The Board shall consist of the State Treasurer, the Director of the Illinois State Scholarship Commission and the Director of the Illinois Board of Higher Education, or their respective designees, and 6 other members to be appointed as follows: The Speaker and Minority Leader of the House of Representatives and the President and Minority Leader of the Senate shall each appoint one member; the Governor shall appoint two members. The Governor and legislative leaders shall give consideration to selecting members with knowledge, skill, and experience, in the academic, business or financial field. The Board of Higher Education representative shall serve as the chair. The appointed members of the Board first appointed shall serve for terms expiring on June 30 in 1989, 1990, 1991, 1992, 1993 and 1994, respectively, or until their respective successors have been appointed and have qualified, the initial term of each such member to be determined by lot. Upon the expiration of the term of any member his successor shall be appointed for a term of 3 years and until his

successor has been appointed and has qualified. Any vacancy shall be filled in the manner of the original appointment for the remainder of the unexpired term. Any member of the Board may be removed by the appointing authority for misfeasance, malfeasance or wilful neglect of duty or other cause after notice and a public hearing unless such notice and hearing shall be expressly waived in writing. Members shall be compensated for actual expenses only. The Board shall meet at least twice annually.

(b) The Board shall have the following responsibilities:

(1) Upon issuance of general obligation bonds, to implement the College Savings Bond program, as provided in this Act, and make available other suitable investment instruments to the general public.

(2) To create a plan for periodic, lump sum or staggered investments;

(3) To make recommendations to the Bureau of the Budget for a marketing procedure or advertising campaigns for College Savings Bonds and other instruments and to assist in the implementation and operation of such procedure or system.

(4) To make recommendations to the Bureau of the Budget regarding the initial offering of College Savings Bonds that are intended to limit the par amount of bonds that may be purchased by individual households to an amount to be determined by the Board.

(5) To advise and make recommendations to the Governor and the Bureau of the Budget regarding the increments in which to market the bonds and recommend maturity dates which will make funds available to purchasers at the time when such funds are needed for educational purposes.

(6) To advise and make recommendations to the General Assembly by June 1, 1988, concerning an advance tuition program insuring full tuition payment and the feasibility of instituting such a program.

(7) To make recommendations to the Governor and the

Bureau of the Budget regarding additional financial incentives as provided in Section 19.7 of the General Obligation Bond Act.

(8) To promulgate rules and regulations necessary to carry out the intent and purpose of this Act.

Section 5. Sections 30-15.26 and 30-15.26a are added to "The School Code", approved March 18, 1961, as amended, the added Sections to read as follows:

(Ch. 122, new par. 30-15.26)

Sec. 30-15.26. The first $25,000 of College Savings Bond investment made pursuant to the "General Obligation Bond Act", approved December 4, 1984, or the first $25,000 of any investment instrument offered under the Illinois College Savings Plan Act [or combination thereof,] shall not be considered in evaluating the financial situation of a student, or be deemed a financial resource of or a form of financial aid or assistance to such student, for the purposes of determining the eligibility of such student for any guaranteed loan, scholarship, grant or monetary assistance awarded by the State Scholarship Commission, the State or any agency thereof pursuant to any other law of this State; nor shall any College Savings Bond investment provided for a student reduce the amount of any guaranteed loan, scholarship, grant or monetary assistance which such student is entitled to be awarded by the State Scholarship Commission, the State or any agency thereof in accordance with any other law of this State.

(Ch. 122, new par. 30-15.26a)

Sec. 30-15.26a. The Board of Higher Education and the State Scholarship Commission jointly shall develop a college cost information program for the purpose of informing parents and guardians of prospective college students of the attributes of preparing financially for higher education. Any information developed shall be submitted to the Board created in Section 4 of this Act.

Section 6. Sections 19.1, 19.2, 19.3, 19.4, 19.5, 19.6 and 19.7 are added to the "General Obligation Bond Act", approved December 4, 1984, as amended, the added Sections to read as follows:

(Ch. 127, new par. 669.1)

Sec. 19.1. The General Assembly hereby finds and declares that for the benefit of the people of the State of Illinois, the conduct and increase of their commerce, the protection and enhancement of their welfare, the development of continued prosperity and the improvement of their health and living conditions, it is essential that this and future generations of youth be given the fullest opportunity to learn and to develop their intellectual and mental capacities and skills; that to achieve these ends it is of the utmost importance that Illinois residents be provided with investment alternatives to enhance their financial access to institutions of higher education; and that it is the intent of this Act to provide to the State of Illinois an alternative low cost method of borrowing for the purposes authorized in this Act and to encourage enrollment in institutions of higher education located in the State of Illinois, all in execution of the public policy set forth herein.

(Ch. 127, new par. 669.2)

Sec. 19.2. As used in this Act, except where the context clearly requires otherwise, the following terms shall have the meanings ascribed to them in this Section:

(a) "College Savings Bonds" means general obligation bonds of the State issued under this Act and designated as General Obligation College Savings Bonds.

(b) "Institution of higher education" means a not-for-profit educational institution or an educational institution which is owned or controlled by the State or any political subdivision, agency, instrumentality, district or municipality thereof, which is authorized by law to provide a

program of education beyond the high school level and, in the case of a not-for-profit educational institution, which

(i) admits as regular students only individuals having a certificate of graduation from a high school, or the recognized equivalent of such a certificate;

(ii) provides an educational program for which it awards a bachelor's degree, or provides an educational program, admission into which is conditioned upon the prior attainment of a bachelor's degree or its equivalent, for which it awards a postgraduate degree, or provides not less than a 2 year program which is acceptable for full credit toward such a degree, or offers not less than a 2 year program in engineering, mathematics, or the physical or biological sciences which is designed to prepare the student to work as a technician and at a semi-professional level in engineering, scientific, or other technological fields which require the understanding and application of basic engineering, scientific, or mathematical principles or knowledge;

(iii) (A) is accredited by a nationally recognized accrediting agency or association or, if not so accredited, is an institution whose credits are accepted, on transfer, by not less than 3 institutions which are so accredited, and holds an unrevoked certificate of approval under "An Act providing for the regulation of privately-operated colleges, junior colleges and universities", approved July 17, 1945, as now or hereafter amended, from the State Superintendent of Education, or (B) is qualified and approved as a "degree granting institution" under "An Act to regulate the granting of academic degrees, diplomas and certificates by certain educational institutions, to provide penalties for the violation thereof and to make an appropriation therefor", approved August 14, 1961, as now or hereafter amended;

(iv) does not discriminate in the admission of students on the basis of race, color or creed;

(v) has a governing board which possesses its own

sovereignty; and

(vi) has a governing board, or its delegated institutional officials, which possesses final authority in all matters of local control, including educational policy, choice of personnel, determination of program, and financial management.

(Ch. 127, new par. 669.3)

Sec. 19.3. In order to provide investors with investment alternatives to enhance their financial access to institutions of higher education located in the State of Illinois, and in furtherance of the public policy of this Act, Bonds authorized by the provisions of the General Obligation Bond Act in the amount of $300,000,000 may be issued and sold from time to time as College Savings Bonds in such amounts as directed by the Governor, upon recommendation by the Director of the Bureau of the Budget. Bonds to be issued and sold as College Savings Bonds shall be designated by the Governor and the Director of the Bureau of the Budget as "General Obligation College Savings Bonds" in the proceedings authorizing the issuance of such Bonds, and shall be subject to all of the terms and provisions of this Act, except that College Savings Bonds may bear interest payable at such time or times and may be sold at such prices and in such manner as may be determined by the Governor and the Director of the Bureau of the Budget. If College Savings Bonds are sold at public sale, the public sale procedures shall be as set forth in Section 11 of this Act. College Savings Bonds may be sold at negotiated sale if the Director of the Bureau of the Budget determines that a negotiated sale will result in either a more efficient and economic sale of such Bonds or greater access by investors resident in the State of Illinois to such Bonds. If any College Savings Bonds are sold at a negotiated sale, the underwriter or underwriters to which such Bonds are sold shall (a) be organized, incorporated or have their principal place of

business in the State of Illinois, or (b) in the judgment of the Director of the Bureau of the Budget, have sufficient capability to make a broad distribution of such Bonds to investors resident in the State of Illinois. In determining the aggregate principal amount of College Savings Bonds that has been issued pursuant to this Act, the aggregate original principal amount of such Bonds issued and sold shall be taken into account.

(Ch. 127, new par. 669.4)

Sec. 19.4. Any College Savings Bonds issued pursuant to this Act shall be direct, general obligations of the State of Illinois and subject to repayment as provided in the General Obligation Bond Act; provided, that in the proceedings of the Governor and the Director of the Bureau of the Budget authorizing the issuance of College Savings Bonds, such officials may covenant on behalf of the State with or for the benefit of the holders of such Bonds as to all matters deemed advisable by such officials, including the terms and conditions for creating and maintaining sinking funds, reserve funds and such other special funds as may be created in such proceedings, separate and apart from all other funds and accounts of the State, and such officials may make such other covenants as may be deemed necessary or desirable to assure the prompt payment of the principal of and interest on such Bonds. The transfers to and appropriations from the General Obligation Bond Retirement and Interest Fund required by this Act shall be made to and from any fund or funds created pursuant to this Section for the payment of the principal of and interest on any College Savings Bonds.

(Ch. 127, new par. 669.5)

Sec. 19.5. If the State fails to pay the principal of or interest on any College Savings Bonds or premium, if any, as the same become due, or shall fail to make any required monthly transfer of funds to provide for the payment of such principal, interest or premium, a civil action to compel

payment may be instituted in the Supreme Court of Illinois as a court of original jurisdiction by the holder or holders of the College Savings Bonds with respect to which such default of payment or failure to make a required transfer exists. Delivery of a summons and a copy of the complaint to the Attorney General shall constitute sufficient service to give the Supreme Court of Illinois jurisdiction of the subject matter of such a suit and jurisdiction over the State and its officers named as defendants for the purpose of compelling such payment or transfer. Any case, controversy or cause of action concerning the validity of this Act relates to the revenue of the State of Illinois.

If the Supreme Court of Illinois denies the holder or holders of Bonds leave to file an original action in the Supreme Court, the bond holder or holders may bring the action in the Circuit Court of Sangamon County.

(Ch. 127, new par. 669.6)

Sec. 19.6. As provided in this Act, the issuance of College Savings Bonds is in all respects for the benefit of the people of the State of Illinois, the conduct and increase of their commerce, the protection and enhancement of their welfare, the development of continued prosperity and the improvement of their health and living conditions and the issuance of such Bonds is for public purposes. In consideration thereof, College Savings Bonds issued pursuant to this Act and the income derived therefrom shall be free from all taxation by the State or its political subdivisions, except for estate, transfer and inheritance taxes.

(Ch. 127, new par. 669.7)

Sec. 19.7. The proceedings of the Governor and the Director of the Bureau of the Budget authorizing the issuance of College Savings Bonds shall also provide for additional financial incentives to be provided to holders of such Bonds to encourage the enrollment of students at institutions of higher education located in the State of Illinois. Such

financial incentives shall be in such forms as determined by the Governor and the Director of the Bureau of the Budget at the time of the authorization of such College Savings Bonds and may include, among others, supplemental payments to the holders of such Bonds at maturity to be applied to tuition costs at institutions of higher education located in the State of Illinois. Such financial incentives shall be provided only if, in the sole judgment of the Director of the Bureau of the Budget, the cost of such incentives will not cause the cost to the State of the proceeds of the College Savings Bonds being sold to be increased by more than 1/2 of 1%. No such financial incentives shall be paid to assist in the financing of the education of a student (i) in a school or department of divinity for any religious denomination or (ii) pursuing a course of study consisting of training to become a minister, priest, rabbi or other professional person in the field of religion.

Section 7. This Act takes effect upon its becoming law.

APPENDIX E

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September 16, 1987

M E M O R A N D U M

TO: Mr. Les Disharoon
Task Force on Alternative College Financing
State House, Annapolis, Maryland

FROM: Mary L. Preis
Assistant Attorney General

SUBJECT: Zero Coupon Bonds

Dr. Laslo Boyd has asked us to address the constitutionality of the State's issuing zero coupon bonds for the purpose of financing a college education. He indicated that such bonds are sold in other states and that the Maryland Task Force on Alternative College Financing may consider a sale of such bonds in Maryland. He also asked whether the State can sell the bonds with maturity dates of longer than 15 years.

A. BACKGROUND

The states which have addressed this savings bond approach have reserved a portion of the general obligation bonds for sale to families saving for higher education. Generally the bonds, like other general obligation bonds, are exempt from state and sometimes federal tax. In other jurisdictions the bonds are marketed widely through banks and financial institutions in small denominations. The bonds are issued without interest coupons, so that the interest is accumulated and paid at maturity, not during the life of the bond; all interest is reinvested for the saver. Bonds are issued at a price that is determined by the prevailing market conditions and interest rates. This price is discounted substantially below the par or face value of the bond because the borrower pays no interest until the bonds mature. A premium is sometimes offered if bonds are redeemed to pay for college expenses and one jurisdiction pays an additional bonus payment bond holders providing proof that their child is enrolled in a

state college or university. See generally Gelfand, State & Local Government Debt Financing, §4:23-25 (1986).

B. BOND ISSUANCE

1. General Obligation Bonds: Article 3, §34 of the Constitution of Maryland provides as follows:

> "No debt shall be hereafter contracted by the General Assembly unless such debt shall be authorized by a law providing for the collection of an annual tax or taxes sufficient to pay the interest on such debt as it falls due, and also to discharge the principal thereof within fifteen years of the time of contracting the same;...."

Further, the credit of the State may not be given or loaned to any individual, association or corporation nor may the State become involved in construction of "works of internal improvement" which involve the full faith or credit of the State.

The State Finance and Procurement Article generally governs the procedure for issuing Maryland general obligation bonds. These bonds are backed by the full faith and credit the State. The law defines a bond as an obligation for the payment of money, by whatever name known or source of fund secured, issued by a state unit under a general or statutory authority. The General Assembly passes an enabling act to authorize a state unit to create a debt and sell bonds. SF §8-201. A state unit may issue bonds in coupon form or any form that qualifies as a registered form under §103 of the Internal Revenue Code of 1954. SF §8-205. Proceeds of a sale of state bonds may be used only for capital improvement unless the enabling act specifically provides otherwise or there is an emergency. SF §8-127. After receiving authority by an enabling act of the General Assembly the Board of Public Works provides for the terms, conditions, security, issuance, sale, delivery, replacement, and repayment by one or more resolutions. SF §8-117-119. General Obligation Bonds must be issued only after a tax or taxes have been imposed to pay the principal and interest of the indebtedness.

Constitutionality: I see no constitutional impediment to the issuance of small denomination zero coupon type bonds so long as a General Obligation Bond Authority enabling act clearly states the public purpose of the debt and authorizes its creation. Although the interest on the bonds is not paid perodically through the life of the bond, all interest will be paid "when it falls due" at maturity of the bonds. See SF §8-127. Finally, because it is a general obligation bond, provision must be made to discharge the principal and interest of the debt within 15 years from the time it is contracted. No bond may have a maturity date later than 15 years from the date of issue.

While I believe the concept of issuing zero coupon general obligation bonds is compatible with State constitutional provisions, this conclusion is based on an imprecise description of the bonds to be issued. The final test of constitutionality will obviously depend on the specific features of the program and the legislation drafted to issue the bonds and retire the debt. Such legislation is complex and, I believe must be approached carefully. See Maryland Finance and Procurement Article, Title 8. Creation of new state, for example, is reviewed by a Debt Affordability Committee that would assess the implications of creating a large outstanding debt principal in exchange for a small initial income from the bonds. Further, I have not addressed any legal questions related to either the tax exempt status or the sale and redemption mechanism of such bonds, both complex issues.

2. Special Fund Bonds: Another kind of bond, a revenue bond, may be issued in Maryland under the Special Fund Doctrine. This doctrine applies where an obligation is incurred and is payable wholly out of incoming revenue of the bond enterprise which it finances. These revenues provide a fund from which the principal and interest of the bonds are paid and no other fund of the government unit may be pledged to pay such a special obligation. Lacher v. Board of Trustees, 243 Md. 500, 507 (1966). No state debt is created when bonds are issued to be repaid from funds, not taxes, flowing solely from the facility to be created by the proceeds of the bonds, so long as there is no pledge of existing state property and no pledge of income from existing state property. Wyatt v. State Roads Commission, 175 Md. 258, 266 (1938).

Under this doctrine State universities and colleges have built auxiliary facilities. In a bond indenture agreement they have pledged that the revenue from facilities financed will flow to an account held in trust to reduce the principal and interest on the bonds. These bonds are issued when an act of legislature enables an institution's governing board to do so and resolutions by the board permit the issuance and sale. It is not necessary that the principal of the debt be discharged within 15 years from date of issue because it is not a public debt of the state under the constitutional provision. Generally, however, the life of the objects financed must at least equal the length of time the bond will be outstanding.

Although a public purpose may be served by promoting saving for a college education, no facilities are being financed by issuance of these bonds. No independent source of revenue is being created to repay the indebtedness. The Special Fund doctrine as it has applied to schools in the past may therefore not apply. Theoretically, however, the state could issue bonds with no coupons, hold the money on deposit in the Treasury or with a financial institution, allow the interest to accrue, pay the cost of the issuance and administrative costs out of the interest earned on the proceeds and use the principal and

interest only to repay the bond holder the face value of the bond at maturity. This would be in effect a savings account for the state; I do not know whether it would be a tax exempt vehicle for savers.

I trust this has been responsive to your request.

MLP/kmi

cc: Dr. Laslo Boyd
Gayle Fink
James J. Mingle

ADVICE OF COUNSEL

NOT AN OFFICIAL OPINION

OF THE ATTORNEY GENERAL